

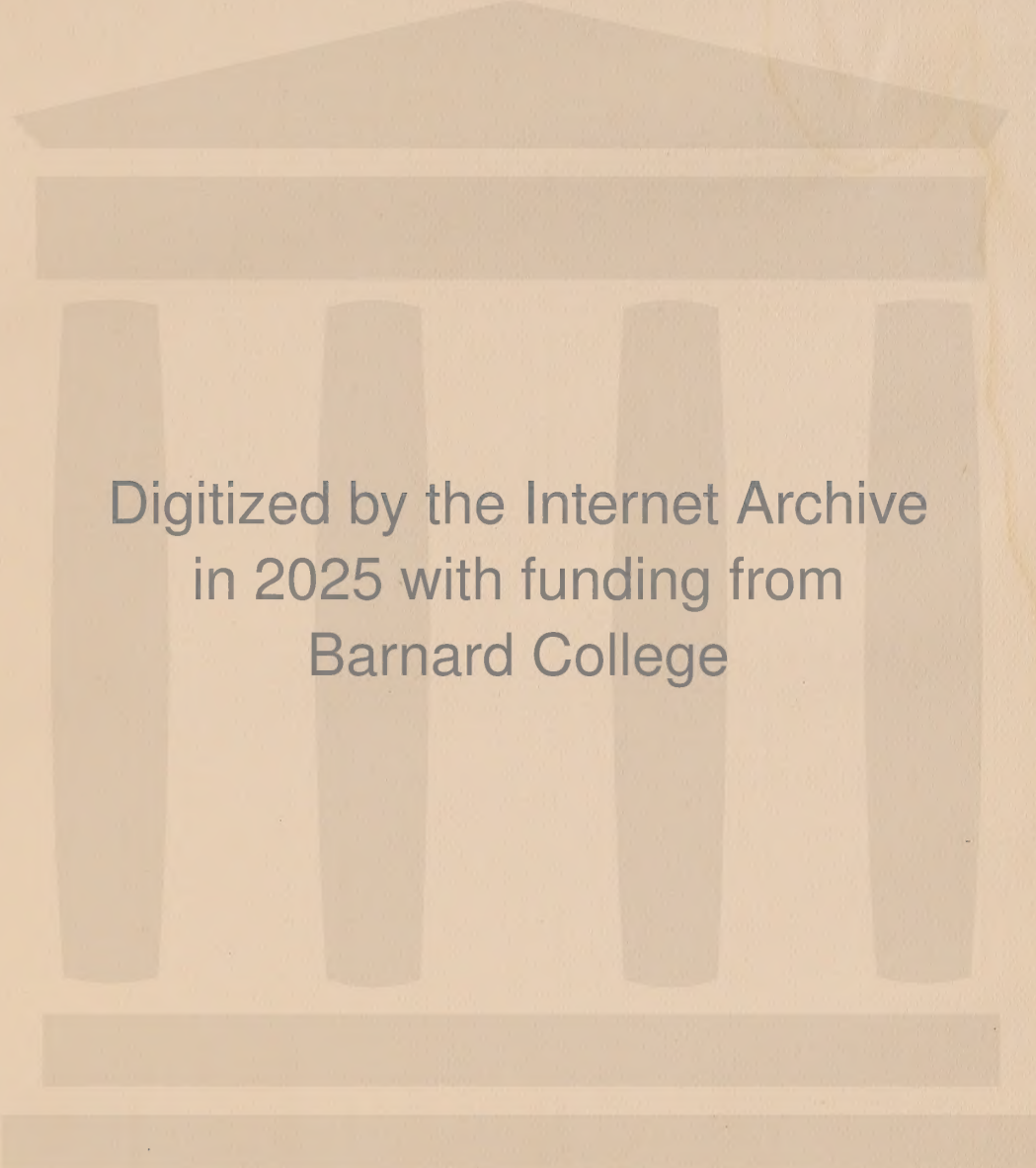


Columbia University
in the City of New York

BARNARD COLLEGE

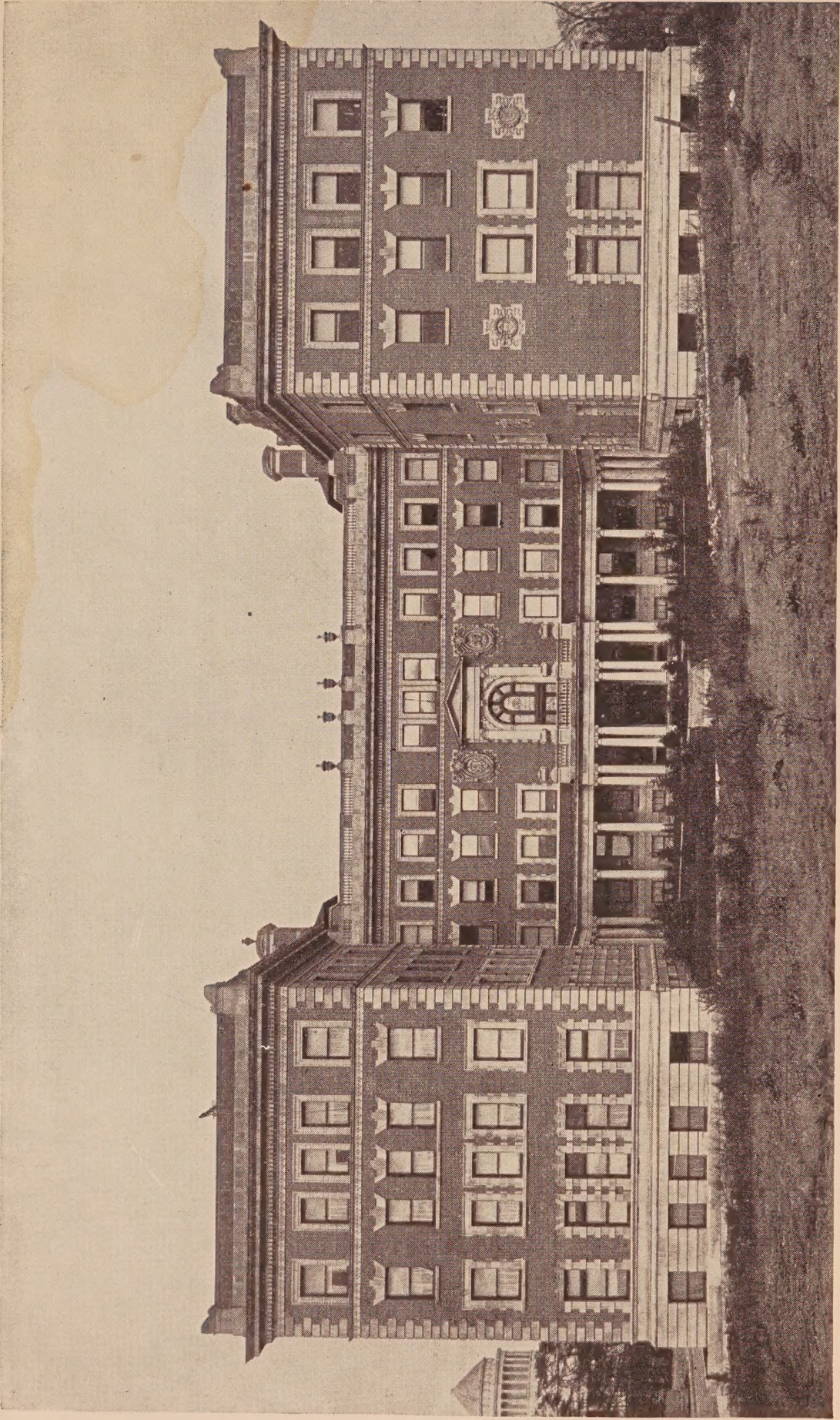
ANNOUNCEMENT,

1905-1906



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Columbia University
Bulletin of Information

BARNARD COLLEGE

ANNOUNCEMENT

1905-1906

May, 1905

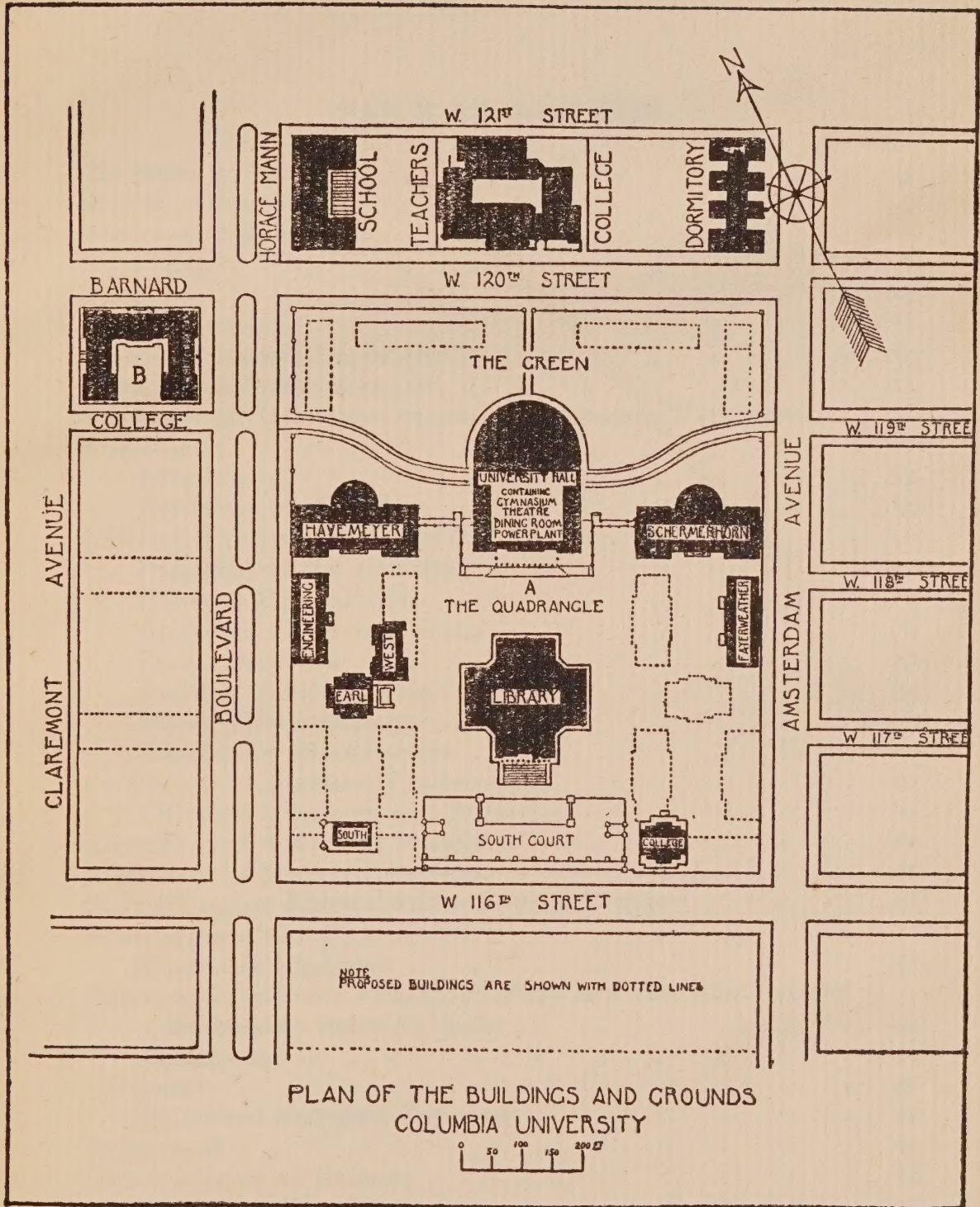


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1905

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COMMITTEE ON SCHOLARSHIPS: The DEAN, *chairman*, Professor ROBINSON and Dr. HIRST

COMMITTEE ON HONORS: Professors LORD, *chairman*, KNAPP, and Dr. KASNER

COMMITTEE ON STUDENT ORGANIZATIONS: Professors CRAMPTON, *chairman*, MOORE, and Dr. REIMER

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FREDERICK A. GOETZE, *Superintendent of Buildings and Grounds*

THE RELATION OF BARNARD COLLEGE TO COLUMBIA UNIVERSITY

According to the agreement made January 19, 1900, between the Trustees of Columbia College in the City of New York and Barnard College, for the purpose of incorporating Barnard College, a college for women, in the educational system of the University, it is provided:

That the President of the University shall be, *ex-officio*, President of Barnard College and a Trustee of Barnard College. He shall preside at the meetings of the Faculty of Barnard College and shall have general supervision and direction of the educational administration of such College as in the other schools of the University.

That the internal administration of Barnard College shall be conducted by a Dean, who shall be appointed by the President of the University, by and with the advice and consent of the Trustees of Barnard College. In the absence of the Dean, an Acting Dean may be appointed by the President.

That Barnard College shall be represented in the University Council of Columbia University by its Dean, who shall have the right to vote in the University Council upon all questions. The Faculty of Barnard College shall consist of the President, the Dean, and all the professors on the staff of the University who give instruction in Barnard College.

That Barnard College shall provide for and maintain such officers of instruction as may, from time to time, be agreed on. Such officers shall be nominated by the Dean of Barnard College, with the approval of the Trustees of Barnard College and of the President of the University, and shall be appointed and reappointed by the University according to its custom. Their standing shall be the same in all respects as that of other like officers in the University. For all services rendered in the University by officers so appointed an equivalent amount of service shall be rendered in Barnard College by other officers of the University of like grade, as may be determined from time to time, with the consent of the officers concerned, by the Dean of the College and the President of the University.

That members of the Faculty of Barnard College may be either men or women.

That on and after July 1, 1904, all of the instruction for women leading to the degree of Bachelor of Arts shall be given separately in Barnard College. Barnard College will assume as rapidly as possible all of the instruction for women in the senior year, without regard to the time limit contained in this section, and undertakes to maintain every professorship established at its instance, so long as the services of the incumbent thereof or an equivalent therefor shall be rendered in Barnard College; and when Barnard College has adequately pro-

vided for its undergraduate work, it will, as its means allow, establish additional professorships in the University, upon foundations providing for courses which shall be open to men and women, to the end that opportunities for higher education may be enlarged for both men and women.

That the University will accept women who have taken their first degree on the same terms as men, as students of the University, and as candidates for the degrees of Master of Arts and Doctor of Philosophy under the Faculties of Philosophy, Political Science, and Pure Science, in such courses as have been or may be designated by these Faculties, with the consent of those delivering the courses, and will make suitable provision for the oversight of such women.

That the University will confer the degree of Bachelor of Arts upon the students of Barnard College who shall have satisfactorily fulfilled in Barnard College the requirements of the University Statutes for that degree. The courses in Barnard College leading to the degree of Bachelor of Arts shall be determined and administered by its own Faculty, and all examinations for admission to Barnard College and in course shall be conducted under the authority of the Faculty of Barnard College. The diploma shall be signed by the President of the University and by the Dean of Barnard College. The degree of Bachelor of Arts conferred upon the graduates of Barnard College shall be maintained at all times as a degree of equal value with the degree of Bachelor of Arts conferred upon the graduates of Columbia College. The equivalency of the two degrees shall be maintained in such manner as the University Council may prescribe.

That, so long as this agreement is in force, Barnard College shall grant no degrees. It shall retain the right to grant certificates to students not candidates for a degree, and it shall exercise all other corporate rights and powers which are not delegated to the University by this agreement. But this agreement shall not be deemed a surrender by Barnard College of any powers conferred upon it by charter.

That Barnard College shall retain its separate corporate organization, and that the Trustees of Barnard College shall continue to provide for the financial support thereof.

That the library of the University shall be open to all women students of the University and of Barnard College upon the same terms as to men.

Teachers College

By the terms of an agreement between Columbia University and Barnard and Teachers Colleges, regular students of Teachers College are permitted to attend courses in Barnard College. Teachers College offers reciprocal advantages to the students of Barnard College. Courses which are counted towards a Teachers College diploma and are open to Seniors of Columbia College are also open to Seniors of Barnard College.

ADMISSION

The Committee on Admissions has charge of everything relating to this subject.

ATTENDANCE

The University requires of all students attendance upon all stated academic exercises. Students who find that stated academic exercises are fixed for days set apart for religious observance by the church to which they belong, and who are prevented by conscientious scruples from performing their University duties on those days, are requested to make application to the appropriate University authority for equitable relief. It should be noted, however, that in case two opportunities for taking a given examination are statedly offered, as for instance the June and September entrance examinations, such students are expected to present themselves on the day which is not set apart as a holy day. In other cases, candidates for admission should make application to the Chairman of the Committee on Admissions of Barnard College, and students already matriculated should apply to the Dean.

ACADEMIC DISCIPLINE

Under the Statutes all students are admitted subject to the disciplinary power of the University.

ADMISSION TO THE FRESHMAN CLASS

Candidates for admission to the freshman class must, at its formation, be at least fifteen years of age; and for admission to advanced standing a corresponding increase of age is required; but this rule may be dispensed with when, in the opinion of the Committee on Admissions, there are sufficient reasons to justify its relaxation.

Every candidate must, before admission, present a certificate of good moral character from her last teacher, or from some properly qualified citizen, and students from other institutions must bring certificates of honorable dismissal.

REQUIREMENTS FOR ADMISSION

Every candidate for admission to the freshman class is required at the entrance examinations to offer subjects amounting to fifteen (15) points ¹ as indicated below.

¹ The relative value of subjects is expressed in points according to the time required for adequate preparation in them; a point in the sense here used represents a course of five (5) periods weekly throughout an academic year of the preparatory school.

The candidate *must* offer:

	COUNTING IN POINTS
English (page 28).....	3
Elementary Latin (page 35).....	4
Elementary Mathematics (page 36).....	3

The candidate may offer any of the following subjects without other restriction than that to offer an advanced subject will involve offering, either at the same time or earlier, the corresponding elementary subject:

	COUNTING IN POINTS
Elementary Greek (page 33).....	3
Elementary History (page 34).....	2
Drawing (page 28).....	1
¹ Music (page 37).....	1
Intermediate French (page 31).....	1
Intermediate German (page 32).....	1
¹ Advanced Greek (page 33).....	1
¹ Advanced History (page 34).....	1
¹ Advanced Latin (page 36).....	1
Advanced Mathematics (page 37).....	1
¹ Advanced Physics (page 38).....	1

The candidate may offer not more than four (4) points in all from the three subjects following:

	COUNTING IN POINTS
Elementary French (page 30).....	2
Elementary German (page 31).....	2
Spanish (page 39).....	2

The candidate may offer not more than two (2) points in all from the five subjects following:

	COUNTING IN POINTS
Botany (page 26).....	1
Chemistry (page 27).....	1
Elementary Physics (page 38).....	1
Physiography (page 39).....	1
¹ Zoölogy (page 39).....	1

ENTRANCE EXAMINATIONS

In 1905 the examinations will begin on June 19 and September 18 respectively. Beginning with 1906, examinations will also be held each year in January.²

In June, 1905, the entrance examinations of Barnard College will be those of the College Entrance Examination Board of which Columbia University is a member.

¹ Candidates will be examined in this subject only in September.

² Full information with regard to the examinations in January, 1906, will be published in the autumn of 1905.

In September, 1905, the entrance examinations of Barnard College will be conducted by the Columbia University Committee on Entrance Examinations, and will be held only at the College. The College Entrance Examination Board at present holds no examinations in September.

APPLICATION FOR EXAMINATION

Every candidate for examination is required to file an application for examination.

For the examinations in June, 1905, the application must be filed with the Secretary of the College Entrance Examination Board, Post-Office Sub-Station 84, New York, N. Y. Applications for examination in New England, in the Middle States, or in Maryland, must be filed on or before June 5. Applications for examination elsewhere in the United States or in Canada must be filed on or before May 29; and applications for examination at points outside of the United States and Canada must be filed on or before May 15. Candidates filing their applications later than the dates named do so at their own risk. Requests for blank forms of application should be addressed to the Secretary of the College Entrance Examination Board and should be accompanied by return postage.

Candidates for the competitive scholarships to be awarded on the basis of the June examinations must, when filing an application with the Secretary of the College Entrance Examination Board, notify the Secretary of that Board for which one of the Barnard College scholarships they are competing; in which case their answer books, after being read by the readers of the Board, will be transmitted to the Committee on Admissions of Barnard College.

For the examinations in September, 1905, candidates for admission to Barnard College should send their applications to the Registrar of Barnard College. Applications must be filed on or before September 11. Candidates filing their applications later than this date do so at their own risk. Requests for blank forms of application should be addressed to the Registrar of Barnard College.

EXAMINATION FEE

Every application for examination in June must be accompanied by a fee of \$5 in the form of a postal order, express order, or draft on New York, to the order of the *College Entrance Examination Board*,¹ for all candidates examined at points in the United States and Canada, and \$15 for all candidates examined at points outside of the United States and Canada.

Every application for examination in September must be accompanied either by a fee of \$5 in the form of a postal order, express order, or draft on New York, to the order of *Barnard College*, by a receipt from the Bursar of Barnard College for an examination fee

¹ An examination fee paid to the College Entrance Examination Board for admission to the June examinations does not cover the matriculation fee of Barnard College.

previously paid, or by the receipt issued by the Secretary of the College Entrance Examination Board for the June examinations of the same year.

If a late application is accepted either by the College Entrance Examination Board, or by the University Committee on Entrance Examinations, a second fee of \$5 is charged to the candidate making such late application.

In every case a candidate who has paid the examination fee will be furnished with a receipt. This receipt should be carefully preserved. It must be presented by the candidate to the Supervisor in charge of the examinations which she attends as evidence that she is entitled to be admitted to the same. No candidate will be admitted to the September examinations upon the receipt of the College Entrance Examination Board, unless that receipt bears the certification of the Registrar of Barnard College that the candidate's application for the September examinations has been filed.

DIVISION OF EXAMINATION

A candidate may present herself at any of the scheduled series of examinations subject to the following restrictions:

(1) She may not present herself at more than three series of examinations except by special consent of the Committee on Admissions of Barnard College.

(2) At the *first* of the *three* series she may offer only such subjects or lettered (or numbered) parts of a subject as are approved by her principal instructor.

(3) The results of an examination shall stand to her credit for nineteen months, but no longer.

PLACES OF EXAMINATION

In June, 1905, entrance examinations will be held at a large number of widely distributed points. A complete list of the places at which examinations are to be held will be published about March 1, and may be obtained from the Secretary of the College Entrance Examination Board, Post-Office Sub-Station 84, New York, N. Y. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the College Entrance Examination Board not later than February 1.

In September, 1905, examinations for admission to Barnard College will be held only at the College.

SCHEDULE OF EXAMINATIONS

In both June and September, 1905, entrance examinations will be conducted in the Barnard College Theatre.

Candidates taking these examinations must report to the Supervisor, in the examination room, fifteen minutes in advance of the first examination which they are to attend.

The schedule for January, 1906, will be published in the autumn of 1905.

June 19-24, 1905

Monday, June 19

Mathematics <i>a</i> , <i>i</i> , <i>ii</i> (Elementary Algebra: to Quadratics; Quadratics, etc.).....	9.15-11.45
German <i>a</i> (Elementary German).....	1-2.45
Physics (Elementary).....	2.55-4.25

Tuesday, June 20

Mathematics <i>c</i> , <i>d</i> (Plane Geometry; Solid Geometry)....	9-12
French <i>a</i> (Elementary French).....	1-2.45
Chemistry.....	2.55-4.25
Spanish.....	4.30-6

Wednesday, June 21

Latin <i>c</i> (Cicero).....	9-10
Latin <i>a</i> , <i>i</i> , <i>ii</i> (Grammar and Composition).....	10.15-11.15
Latin <i>m</i> (Sight Translation).....	11.30-12.30
History <i>a</i> (Ancient History).....	1.30-4
History <i>c</i> (English History).....	1.30-4
German <i>b</i> (Intermediate German).....	4.15-6

Thursday, June 22

Greek <i>b</i> (Xenophon).....	9-10
Greek <i>a</i> , <i>i</i> , <i>ii</i> (Grammar and Composition).....	10.05-11.05
Greek <i>g</i> (Sight Translation).....	11.10-12.10
Drawing.....	9.30-12
Latin <i>d</i> (Virgil's <i>Æneid</i> , Books I-VI).....	2.05-3.05
Latin <i>l</i> (Advanced Latin Composition).....	3.10-4.10
French <i>b</i> (Intermediate French).....	4.15-6

Friday, June 23

English <i>a</i> (Reading and Practice).....	9-10.30
English <i>b</i> (Study and Practice).....	10.40-12.10
Mathematics <i>e</i> (Trigonometry).....	1-3
Greek <i>c</i> (Homer's <i>Iliad</i> , Books I-III).....	3.15-4.15
Greek <i>f</i> (Advanced Prose Composition).....	4.15-5.15

Saturday, June 24

History <i>b</i> (Mediæval and Modern History).....	9.30-12
History <i>d</i> (American History).....	9.30-12
Botany ¹	1-2.30
Physiography ¹	1-2.30

¹ A candidate offering both of these subjects will be required to complete the examination in both before being permitted to leave the examination room.

September 18-23, 1905

Monday, September 18

Mathematics <i>a</i> , <i>i</i> , <i>ii</i> (Elementary Algebra: to Quadratics; Quadratics, etc.).....	9.15-11.4
German <i>a</i> (Elementary German).....	1-3
Physics (Elementary).....	3-4.30
Music.....	4.30-6

Tuesday, September 19

Mathematics <i>c</i> , <i>d</i> (Plane Geometry; Solid Geometry)....	9-12
French <i>a</i> (Elementary French).....	1-3
Chemistry.....	3-4.30
Spanish.....	4.30-6

Wednesday, September 20

Latin <i>a</i> , <i>i</i> , <i>ii</i> (Grammar and Composition).....	9-10
Latin <i>c</i> (Cicero)....	10-11
Latin <i>m</i> (Sight Translation).....	11-12
History <i>a</i> (Ancient History).....	1-2.30
History <i>c</i> (English History).....	1-2.30
German <i>b</i> (Intermediate German).....	2.45-4.30

Thursday, September 21

Greek <i>a</i> , <i>i</i> , <i>ii</i> (Grammar and Composition).....	9-10
Greek <i>b</i> (Xenophon).....	10-11
Greek <i>g</i> (Sight Translation).....	11-12
Drawing.....	9.30-12
Latin <i>d</i> (Virgil's <i>Æneid</i> , Books I-VI).....	2-3
Latin <i>l</i> (Advanced Latin Composition).....	3-4
French <i>b</i> (Intermediate French).....	4-5.45

Friday, September 22

English <i>a</i> (Reading and Practice).....	9-10.30
English <i>b</i> (Study and Practice).....	10.30-12
Mathematics <i>e</i> (Trigonometry).....	1-3
Greek <i>c</i> (Homer's <i>Iliad</i> , Books I-III).....	3.15-4.15
Greek <i>f</i> (Advanced Greek Composition).....	4.15-5.15

Saturday, September 23

History <i>b</i> (Mediæval and Modern History).....	9-10.30
History <i>d</i> (American History).....	9-10.30
Botany ¹	10.30-12

¹ A candidate offering more than one of these subjects will be required to complete the examinations in all the subjects offered before being permitted to leave the examination room.

Physiography ¹	10.30-12
Advanced Greek ¹	10.30-12
Advanced History ¹	10.30-12
Advanced Latin ¹	10.30-12
Advanced Physics ¹	10.30-12
Zoölogy ¹	10.30-12

REPORT OF ENTRANCE EXAMINATIONS

The Committee on Admissions will report to the Dean as soon as practicable after the conclusion of the entrance examinations in June the names of those candidates who, having passed a satisfactory examination, may be admitted with or without conditions and of those who must present themselves for reëxamination in September.

The Committee on Admissions will report to the Dean not later than one week after the conclusion of the entrance examinations in September the names of those candidates who, upon a final showing, may be admitted with or without conditions and of those who have been rejected.

ENTRANCE CONDITIONS AND PROBATION

A student may be admitted to the freshman class on probation when the total number of points received by her in the entrance examinations amounts to eleven (11) out of the total required fifteen (15) points; but this rule is subject to the proviso that the four (4) points of deficiency do not include the whole of English, Elementary Latin, or Elementary Mathematics. A total failure in any one of these subjects will be regarded as disqualifying a candidate for admission.

A freshman admitted conditionally will be held under probation during the first half-year of residence. Not later than Tuesday of the second week following the Christmas holidays, each department in which students on probation attend shall make to the Dean a special report of progress in the case of every such student. The Dean shall as soon as practicable after the mid-year examinations decide as to each student on probation, whether she shall be admitted to full standing, have her period of probation extended, or be dropped from the roll.

The mark C, B, or A, obtained in any subject at the end of the first half-year of residence, will be regarded as removing an entrance condition in that subject, unless the condition was incurred in a part of the subject not directly involved in the work of the college course. Every entrance condition that is not removed under the operation of the foregoing provision must be made good at the regular entrance examinations of the year following the student's admission.

¹ A candidate offering more than one of these subjects will be required to complete the examinations in all the subjects offered before being permitted to leave the examination room.

The College holds no special examinations to enable students to remove entrance conditions.

No student may be admitted to the sophomore class until she shall have removed all her entrance conditions.

ADMISSION TO ADVANCED STANDING

Candidates for admission from other colleges and students who desire to be admitted to advanced standing on examination must make application in writing to the Barnard College Committee on Admissions. Proper blanks for the purpose may be obtained from the Registrar. The application should be made at least one week before the first day of the September entrance examinations.

Every candidate for admission to advanced standing must show that she has attained proficiency in the equivalent of

1. The requirements for admission to the freshman class;
2. All the prescribed studies already pursued by the class to which she seeks admission;
3. As many elective studies as she would have pursued if she had entered the class at the beginning of the freshman year.

A candidate may be admitted notwithstanding deficiencies in some of these studies, but no candidate will be recommended for the degree of Bachelor of Arts until she shall have brought all her studies up to the point required for that degree.

Every candidate from another college is required to furnish (1) official statements of her record in her various college studies, (2) letters or other evidence showing the opinion of her instructors in regard to her scholarship and character, (3) a letter of honorable dismissal from the college which she is leaving, and (4) a catalogue or announcement of the college that she leaves in which are plainly marked every requirement for admission and every course of instruction for which she has received credit.

The credits granted in any subject to a student admitted with advanced standing may be withdrawn or diminished in amount, if, in pursuing such subject after admission to Barnard College, the student prove that the granting of the credits was wholly or in part unwarranted by her previous work.

No student may receive a degree who has resided less than two full half-years at Barnard College. With regard to the time within which all requirements for the degree of Bachelor of Arts must be fulfilled see paragraph 11, p. 45.

No applicant will be allowed to enter the senior class as a candidate for the degree of Bachelor of Arts after October 15 in any year.

Candidates for admission to the freshman class offering for entrance more than the required 15 points shall be given credit toward a degree for this extra work, on a basis to be determined by the Committee on Admissions, provided that not more than 18 of the 120 points required for a degree may be gained in this way.

ADMISSION AS SPECIAL STUDENTS

Candidates for admission as special students must make application in writing at least one week before the first day of the entrance examinations in September or in January. Proper blanks for this purpose may be obtained from the Registrar.

Special students in Barnard College are of two classes: non-matriculated and matriculated.

Non-matriculated special students must be women of mature age who wish to pursue chiefly advanced courses of special study. They may be admitted at the discretion of the Committee on Admissions without passing formal entrance examinations. They must furnish proof that they have at some time pursued the studies included in the matriculation examinations and must satisfy the requirements of the department that they desire to enter.

No courses taken by non-matriculated special students can at any time be counted by them toward a degree.

Matriculated special students are women who wish, without taking a degree, to make a serious study of some subject or group of subjects. They must pass the regular examinations for admission to the freshman class and have full credit for fifteen (15) points of the entrance requirements. (See p. 17.) They may, therefore, in event of a change of plan, be credited with such of their courses as may coincide with the courses leading to a degree.

Except for reasons of weight, satisfactory to the Committee on Admissions, no one will be received as a special student who is less than eighteen years of age, or who has, within ten months of the time of her application, been rejected as a regular student, or who has, within that period, become deficient as a regular student.

Once admitted to the college, special students will be allowed to select their own courses of study subject to the general approval of the Dean and to the particular approval, for each course selected, of the head of the department in which the course is given.

Each student is required to pursue in any year courses amounting to at least eight (8) points, unless excused by the Dean for reasons of special weight.

In the courses which they severally pursue all special students will be held to the observance of the same regulations as to attendance, examination, proficiency, and deficiency as regular students.

DEFINITIONS OF REQUIREMENTS¹

(Specimens of the question papers set by Columbia University may be obtained from the Registrar upon application. The question papers set by the College Entrance Examination Board are published in book form by Ginn & Company, Boston, Mass. The volumes for 1901, 1902, 1903, and 1904 are sold for sixty cents each.)

BOTANY² (counting one point)

The candidate should have received training by means of the laboratory method in:

The structure and the more obvious features of the life history of at least ten types among the higher seed plants chosen from the more representative families (*e. g.*, Gramineæ, Liliaceæ, Salicaceæ, Ranunculaceæ, Rosaceæ, Leguminosæ, Cruciferae, Solanaceæ, Labiatae, Compositae). In addition to these, the following types are recommended among the remaining lower groups of plants: pine, *Selaginella*, a fern, a moss (*Polytrichum* or *Funaria*), a leafy hepatic, *Marchantia*, a mildew (*Microsphaera*), an agaric, *Vaucheria*, *Spirogyra*, and a protophyte (preferably *Sphaerella*).

Physiology. This work should cover the essential facts concerning irritability, photosynthesis, respiration, digestion, growth, and reproduction.

Ecology. The natural history of plants should receive considerable attention, and the behavior of plants toward environmental factors (especially light and moisture), dissemination, cross and close pollination, and the more important structural and physiological characteristics of plant formations (hydrophytes, halophytes, mesophytes, and xerophytes) should be included.

As evidence of proper laboratory training and of satisfactory work, the note-book of the candidate should be submitted *at the time of the examination*. The note-book must bear the endorsement of the teacher, certifying that it is a true record of the candidate's work. Candidates desiring the return of their note-books should apply for them after the examination to the Secretary of the University. Note-books for the return of which no application is made will be preserved for one year only.

¹ The relative value of subjects is expressed in points according to the time for adequate preparation in them; a point in the sense here used represents a course of five (5) periods weekly throughout an academic year of the preparatory school.

² For a more detailed statement of the requirement in Botany the reader is referred to the definitions of the requirements published by the College Entrance Examination Board. Applications for the pamphlet containing these definitions should be addressed to the Secretary of the College Entrance Examination Board, Post-Office Sub-Station 84, New York, N. Y.

CHEMISTRY (counting one point)

The candidate's preparation in Chemistry should include:

- a. The study of a standard text-book, to the end that the pupil may gain a comprehensive and connected view of the most important facts and laws of elementary chemistry.
- b. Instruction by lecture-table demonstrations, to be used mainly as a basis for questioning upon the general principles involved in the pupil's laboratory investigations.
- c. Individual laboratory work, comprising at least forty exercises.

The following outline includes only the indispensable things which must be studied in the class-room and laboratory. The material is, for the most part, common to all elementary text-books and laboratory manuals. The order of presentation will naturally be determined by each teacher for himself.

OUTLINE.—The chief physical and chemical characteristics, the preparation and the recognition of the following elements together with their principal compounds: *oxygen, hydrogen, carbon, nitrogen, chlorine, bromine, iodine, fluorine, sulphur*, phosphorus, silicon, potassium, *sodium*, calcium, magnesium, *zinc*, copper, mercury, silver, aluminum, *lead*, tin, *iron*, manganese, chromium.

More detailed study should be confined to the italicized *elements* (as such) and to a restricted list of compounds such as: water, hydrochloric acid, carbon-monoxide, carbon-dioxide, oxides of nitrogen, nitric acid, ammonia, sulphur-dioxide, sulphuric acid, hydrogen-sulphide, sodium-hydroxide, ammonium-hydroxide.

Attention should be given to the atmosphere (constitution and relation to animal and vegetable life), flames, acids, bases, salts, oxidation and reduction, crystallization, combining proportions by weight and volume, calculations founded on these and Boyle's and Charles's laws, symbols and nomenclature, atomic theory, atomic weights, valency (in a very elementary way), nascent state, natural grouping of the elements, solution (solvents and solubility of gases and solids and liquids, saturation), strength of acids and bases, conservation and dissipation of energy, chemical energy, electrolysis. Chemical terms should be clearly understood, and the pupil should be able to illustrate and apply the ideas they embody. The theoretical topics are not intended to form separate subjects of study, but to be taught only so far as is necessary for the correlation and explanation of the experimental facts.

A list of suitable laboratory experiments is contained in the definitions of the requirements published by the College Entrance Examination Board and may be obtained upon application to the Secretary of the Board, Post-Office Sub-Station 84, New York, N. Y.

LABORATORY NOTE-BOOK.—Every candidate must present *at the time of her examination in chemistry* a note-book in which she has recorded the steps and the results of her laboratory experiments. A candidate

who fails to present such a note-book cannot receive credit for the examination. Each note-book must contain an index of the experiments which it describes and must be endorsed by the instructor, the endorsement being written in ink on the inside of the cover. The endorsement must in effect be as follows:

I certify that this note-book is a true and original record of experiments actually performed by.....
in the chemical laboratory of.....School
during the year 19....

Instructor in Chemistry.

DRAWING (counting one point)

A candidate must be able to draw and sketch correctly and with proper shading and accuracy of proportion, a simple geometrical figure, a group of geometrical solids, or a simple piece of machinery, showing a fair knowledge of the rules of perspective and light and shade as applied in freehand sketching. A candidate must also be able to reproduce from a flat copy with enlargement or reduction in size.

A candidate who has had a fair amount of training in drawing and wishes to be excused from a formal examination in this subject may at the time of the entrance examinations submit drawings, especially systematic sets of drawings, executed at school. They should be accompanied by a certificate from her teacher to the effect that they are the candidate's own work. If they indicate a satisfactory proficiency, they will be accepted in lieu of the examination. Drawings thus submitted should be sent to the *Secretary of Columbia University* at least two weeks before the day on which the examinations begin.

ENGLISH (counting three points)

No applicant will be accepted in English whose work is notably defective in point of spelling, grammar, idiom, punctuation, or division into paragraphs.

- a. Reading and composition.—The candidate will be required to present evidence of a general knowledge of the subject-matter of the prescribed books, and to answer simple questions on the lives of their authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number—perhaps ten or fifteen—set before her in the examination paper. The treatment of these topics is designed to show the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book,¹ properly certified by her instructor, con-

¹ Such exercise books should be prepared in accordance with a list of directions, to be obtained by addressing the Secretary of the University. *Exercise books should be sent to the Secretary of Columbia University not later than two weeks before the first day of the ex-*

taining compositions or other written work done in connection with the reading of the books.

The candidate is expected to read intelligently *all* the books prescribed. She should read them as she reads other books; she is not expected to know them minutely, but to have freshly in mind their most important parts. In preparation for this part of the requirement, it is important that the candidate shall have been instructed in the fundamental principles of rhetoric.

Candidates intending to take this part of the examination should read the books prescribed for the year in which they propose to submit themselves for examination in this subject.

The books prescribed for this part of the examination are as follows:

In 1905: Shakspeare's Merchant of Venice and Julius Cæsar; The Sir Roger de Coverley Papers in the Spectator; Goldsmith's Vicar of Wakefield; Coleridge's Ancient Mariner; Scott's Ivanhoe; Carlyle's Essay on Burns; Tennyson's Princess; Lowell's Vision of Sir Launfal; George Eliot's Silas Marner.

In 1906, 1907, and 1908: Shakspeare's Merchant of Venice and Macbeth; The Sir Roger de Coverley Papers in the Spectator; Irving's Life of Goldsmith; Coleridge's Ancient Mariner; Scott's Ivanhoe and The Lady of the Lake; Tennyson's Gareth and Lynette, Launcelot and Elaine, and The Passing of Arthur; Lowell's Vision of Sir Launfal; George Eliot's Silas Marner.

- b. Study and composition.—This part of the examination presupposes the thorough study of each of the works named below. The examination will be upon the subject-matter, the literary form, and the logical structure. The candidate may be required, in addition, to answer questions involving the essentials of English grammar, and questions on the leading facts in those periods of English literary history to which the prescribed works belong.

In connection with the reading and study of the required books, parallel or subsidiary reading should be encouraged, and a considerable amount of English poetry should be committed to memory. The essentials of English grammar should not be neglected in preparatory study.

The books prescribed for this part of the examination are as follows:

In 1905: Shakspeare's Macbeth; Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison.

In 1906, 1907, and 1908: Shakspeare's Julius Cæsar; Milton's

aminations. Within ten days the teacher will be informed whether the candidate is, or is not, excused from examination on the books prescribed for reading. Exercise books will *not* be returned to the writers.

Lycidas, Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America; Macaulay's Essay on Addison and Life of Johnson.

FRENCH

a. Elementary (counting two points)

THE AIM OF THE INSTRUCTION.—At the end of the elementary course the pupil should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of everyday life, or based upon a portion of the French text read, and to answer questions on the rudiments of the grammar, as defined below.

THE WORK TO BE DONE.—During the first year the work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural of nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs, prepositions, and conjunctions; the order of words in the sentence, and the elementary rules of syntax; (3) abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (4) the reading of from 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; (5) writing French from dictation.

During the second year the work should comprise: (1) the reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About's *Le roi des montagnes*, Bruno's *Le tour de la France*, Daudet's easier short tales, La Bédolière's *La Mère Michel et son chat*, Erckmann-Chatrian's stories, Foa's *Contes biographiques* and *Le petit Robinson de Paris*, Foncin's *Le pays de France*, Labiche and Martin's *La poudre aux yeux* and *Le voyage de M. Perrichon*, Legouvé and Labiche's *La cigale chez les fourmis*, Malbot's *Sans famille*, Mairé's *La tâche du petit Pierre*, Mérimée's *Colomba*, extracts from Michelet, Sarcey's *Le siège de Paris*, Verne's stories.

b. Intermediate (counting one point)

THE AIM OF THE INSTRUCTION.—At the end of the intermediate course the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

THE WORK TO BE DONE.—This should comprise the reading of from 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts are: About's stories, Augier and Sandeau's *Le gendre de M. Poirier*, Béranger's poems, Corneille's *Le Cid* and *Horace*, Copée's poems, Daudet's *La Belle-Nivernaise*, La Brète's *Mon oncle et mon curé*, Madame de Sévigné's letters, Hugo's *Hernani* and *La chute*, Labiche's plays, Loti's *Pêcheur d'Islande*, Mignet's historical writings, Molière's *L'avare* and *Le bourgeois gentilhomme*, Racine's *Athalie*, *Andromaque*, and *Esther*, George Sand's plays and stories, Sandeau's *Mademoiselle de la Seiglière*, Scribe's plays, Thierry's *Récits des temps mérovingiens*, Thiers's *L'expédition de Bonaparte en Egypte*, Vigny's *La canne de jonc*, Voltaire's historical writings.

GERMAN**a. Elementary (counting two points)**

THE AIM OF THE INSTRUCTION.—At the end of the elementary course in German the pupil should be able to read at sight, and to translate, if called upon, by way of proving her ability to read, a passage of very easy dialogue or narrative prose, help being given upon unusual words and constructions, to put into German short English sentences taken from the language of everyday life or based upon the text given for translation, and to answer questions upon the rudiments of grammar, as defined below.

THE WORK TO BE DONE.—During the first year the work should comprise: (1) careful drill upon pronunciation; (2) the memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar—that is, upon the inflection of the articles, of such nouns as belong to the language of everyday life, of adjectives, pronouns, weak verbs, and the more usual strong verbs; also upon the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word-order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (5) the reading of from 75 to 100 pages of graduated texts from a reader, with constant practice in

translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in the reproduction from memory of sentences previously read.

During the second year the work should comprise: (1) the reading of from 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in the translation into German of easy variations upon the matter read, and also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; (3) continued drill upon the rudiments of the grammar, directed to the ends of enabling the pupil, first, to use her knowledge with facility in the formation of sentences, and, secondly, to state her knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Andersen's *Märchen* and *Bilderbuch ohne Bilder*; Arnold's *Fritz auf Ferien*; Baumbach's *Die Nonna* and *Der Schwiegersohn*; Gerstäcker's *Germelshausen*; Heyse's *L'Arrabbiata*, *Das Mädchen von Treppi*, and *Anfang und Ende*; Hillern's *Höher als die Kirche*; Jensen's *Die braune Erica*; Leander's *Träumereien* and *Kleine Geschichten*; Seidel's *Märchen*; Stökl's *Unter dem Christbaum*; Storm's *Immensee* and *Geschichten aus der Tonne*; Zschokke's *Der zerbrochene Krug*.

Among the shorter plays the best available are perhaps Benedix's *Der Prozess*, *Der Weiberfeind*, and *Günstige Vorzeichen*; Elz's *Er ist nicht eifersüchtig*; Wichert's *An der Majorsecke*; Wilhelmi's *Einer muss heiraten*. It is recommended, however, that not more than one of these plays be read. The narrative style should predominate. A good selection of reading matter for the second year would be Andersen's *Märchen*, or *Bilderbuch*, or Leander's *Träumereien*, to the extent of, say, forty pages. After that such a story as *Das kalte Herz*, or *Der zerbrochene Krug*; then *Höher als die Kirche*, or *Immensee*; next a good story by Heyse, Baumbach, or Seidel; lastly *Der Prozess*.

b. Intermediate (counting one point)

THE AIM OF THE INSTRUCTION.—At the end of the intermediate course the pupil should be able to read at sight German prose of ordinary difficulty, whether recent or classical; to put into German a connected passage of simple English, paraphrased from a given text in German; to answer any grammatical questions relating to usual forms and essential principles of the language, including syntax and word-formation; and to translate and explain (so far as explanation may be necessary) a passage of classical literature taken from some text previously studied.

THE WORK TO BE DONE.—The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also

grammatical drill upon the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with special reference to the infinitive and subjunctive), and likewise upon word-order and word-formation.

The intermediate course is supposed to be the elementary course, plus one year's work at the rate of not less than four recitations a week. Suitable reading matter for the third year can be selected from such works as the following: Ebner-Eschenbach's *Die Freiherren von Gemperlein*; Freytag's *Die Journalisten* and *Bilder aus der deutschen Vergangenheit*—for example, *Karl der Grosse*, *Aus den Kreuzzügen*, *Doktor Luther*, *Aus dem Staat Friedrichs des Grossen*; Fouqué's *Undine*; Gerstäcker's *Irrefahrten*; Goethe's *Hermann und Dorothea* and *Iphigenie*; Heine's poems and *Reisebilder*; Hoffmann's *Historische Erzählungen*; Lessing's *Minna von Barnhelm*; Meyer's *Gustav Adolfs Page*; Moser's *Der Bibliothekar*; Riehl's *Novellen*—for example, *Burg Neideck*, *Der Fluch der Schönheit*, *Der stumme Ratsherr*, *Das Spielmannskind*; Rosegger's *Waldheimat*; Schiller's *Der Neffe als Onkel*, *Der Geisterseher*, *Wilhelm Tell*, *Die Jungfrau von Orleans*, *Das Lied von der Glocke*, *Balladen*; Scheffel's *Der Trompeter von Säckingen*; Uhland's poems; Wildenbruch's *Das edle Blut*.

GREEK

Elementary (counting three points)

a. i. Greek Grammar.

The common forms, idioms, and constructions, and the general grammatical principles of Attic Greek prose.

ii. Greek Composition.

Translation into Greek of detached sentences to test the candidate's knowledge of grammatical constructions.

The examination in the two subjects immediately preceding will be based on the first two books of Xenophon's *Anabasis*.

b. Xenophon.

The first four books of the *Anabasis*.

c. Homer.

The first three books of the *Iliad* (omitting II, 494–end) and the constructions, poetical forms, and prosody of Homer's *Iliad*.

f. Advanced Greek Composition.

Translation into Greek of continuous prose based on Xenophon and other Attic prose of similar difficulty.

g. Sight Translation.

Translation into English at sight, based on prose of no greater difficulty than Xenophon's *Anabasis*.

Advanced (counting one point)

Candidates offering Greek as an advanced subject must present the equivalent of the course known as Greek 1–2 (see courses announced by the Department of Greek). In Homer, for which no equivalent

will ordinarily be accepted, the minimum requirement will be 1600 lines in addition to the amount offered for the elementary examination. The candidate must also offer the eight orations of Lysias in Morgan's edition, or an equivalent amount of similar Greek, and in prose composition at least twenty exercises in the writing of connected narrative prose. The exercises in Part III of Allinson's Greek Prose Composition will show the grade of preparation demanded. Candidates applying for examination in this subject must designate the equivalents, if any, which they wish to offer.

HISTORY

Elementary (counting two points)

Candidates offering history as an elementary subject may present themselves for examination upon either of the following groups. They will not be permitted to offer both of these groups as elementary subjects.

First Group:

1. Ancient history, including a brief introductory study of the Oriental peoples and early mediæval history to the death of Charlemagne, with due reference to art, literature, and government.
2. Mediæval and modern history, with due reference to the growth of the state-system.

Second Group:

3. English history, with due reference to social and political development.
4. American history, with the elements of civil government.

NOTE.—For preparation in either of these groups a course of study equivalent to at least three lessons a week for two years will be needful. On examination a candidate must show such general knowledge of each field offered as may be acquired from the study of an accurate text-book of not less than three hundred pages. Since, however, the examination will be so framed as to require comparison and the use of judgment rather than mere exercise of memory on the part of the pupil, it is recommended that the teacher prescribe a course of supplementary reading of not less than five hundred pages dealing with the more important periods and events in both of the historical fields offered. Geographical knowledge will be tested by requiring the location of places and movements on an outline map.

Advanced (counting one point)

The requirement in advanced history is intended to be an equivalent for History A1-A2—the course prescribed in Barnard College (see courses given by Department of History). The work done at school, therefore, should be substantially identical with that course. Those candidates who have taken the examination in elementary history, and desire to offer history as an advanced subject, must present themselves for examination upon the historical fields included in *that*

group which they did not offer as an elementary subject. For example, if a candidate offers the first group as the elementary subject, she must offer the second group as the advanced subject, and *vice versa*. The examination will pré-suppose superior ability on the part of the candidate in advanced history to understand the significance of historical events, movements, or tendencies, to discern similarities and contrasts, and to combine results.

As further evidence of proficiency, satisfactory written work, done at school and duly certified by the teacher as to independent preparation, must be submitted. This work must be presented in the form of a note-book, or bound collection of notes, containing not less than five thousand words on each historical field offered, and must show practice in at least three of the following exercises:

- (a) Notes and digests of reading outside of the text-books.
- (b) Written recitations requiring the use of judgment, and the application to new questions of knowledge already gained.
- (c) Written parallels between historical characters, events, or periods.
- (d) Brief studies of topics limited in scope, prepared outside the class-room and illustrated by some reference to contemporary material.
- (e) Historical maps or charts showing explorations, migrations, conquests, territorial changes, or social phenomena.

The written work must be sent to the Secretary of Columbia University two weeks before the entrance examinations begin.

LATIN

Elementary (counting four points)

a. i. Latin Grammar.

The inflections; the simpler rules for composition and derivation of words; syntax of cases and verbs; structure of the sentence in general, with particular regard to relative and conditional sentences, indirect discourse, and the subjunctive.

ii. Latin Composition.

Translation into Latin of detached sentences and very easy, continuous prose based upon Cæsar and Cicero.

c. Cicero.

Any six orations from the following list, but preferably the first six mentioned:

The four orations against Catiline, Archias, and the Manilian Law, Marcellus, Roscius, Milo, Sestius, Ligarius, the Fourteenth Philippic.

d. Virgil.

The first six books of the *Æneid*, and so much of prosody as relates to accent, versification in general, and the dactylic hexameter.

l. Advanced Latin Composition.

Translation into Latin of continuous prose of moderate difficulty based on Cicero.

m. Sight Translation.

Translation into English at sight, based exclusively on prose of no greater difficulty than the easier parts of Cicero's orations.

Advanced (counting one point)

Candidates offering Latin as an advanced subject must present the equivalent of the course known as Latin A1-A2 (see courses announced by the Department of Latin). This course comprises the reading of Cicero's *De Senectute* and *De Amicitia*, a review of the syntax of the verb as contained in any standard grammar, and a knowledge of prose composition as represented by the second part of Daniells's *New Latin Composition*; also the reading of the first and third books of the *Odes* of Horace, with a satisfactory knowledge of the prosody.

Candidates applying for examination in this subject must designate the equivalents, if any, which they wish to offer.

MATHEMATICS**Elementary** (counting three points)*a. Elementary algebra.**i. The four fundamental operations for rational algebraic expressions.*

Factoring, determination of highest common factor and lowest common multiple by factoring.

Fractions; including complex fractions, ratio and proportion.

Linear equations, both numerical and literal, containing one or more unknown quantities.

Problems depending on linear equations.

Radicals, including the extraction of the square root of polynomials and of numbers.

Exponents, including the fractional and negative.

ii. Quadratic equations, both numerical and literal.

Simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations.

Problems depending upon quadratic equations.

The binomial theorem for positive integral exponents.

The formulas for the n th term and the sum of the terms of arithmetic and geometric progressions, with applications.

It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

c. Plane geometry.

The usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons, and the measurement of the circle.

The solution of numerous original exercises, including loci problems.

Applications to the mensuration of lines and plane surfaces.

Advanced (counting one point)

d. Solid geometry.

The usual theorems and constructions of good text-books; including the relations of planes and lines in space; the properties and measurements of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle.

The solution of numerous original exercises, including loci problems.

Applications to the mensuration of surfaces and solids.

e. Trigonometry.

Definitions and relations of the six trigonometric functions as ratios; circular measurement of angles.

Proofs of principal formulas, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle, the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas.

Solution of trigonometric equations of a simple character.

Theory and use of logarithms (without the introduction of work involving infinite series).

The solution of right and oblique triangles, and practical applications, including the solution of right spherical triangles.

MUSIC¹ (counting one point)

The candidate may offer either of the following subjects, preferably the first:

a. Musical Appreciation.

The outlines of the history of music beginning with the polyphonic period, special stress being laid on the development of the art and the compositions of the masters rather than on biographic details; a knowledge of the elements of musical form.

b. Harmony

Musical notation; triads, seventh chords, and ninth chords, and their inversions; the mutual relationships of chords; modula-

¹ The requirements as here stated are provisional and for 1905 only. They will be modified in detail for succeeding years.

tion; passing tones, appoggiaturas, suspensions, and altered chords; harmonic analysis; the ability to harmonize a given melody in four vocal parts.

PHYSICS

Elementary (counting one point)

- The candidate's preparation in physics should include:
- a. The study of a standard text-book supplemented by the use of many varied numerical problems, to the end that the pupil may gain a comprehensive and connected view of the most important facts and laws in elementary physics.
 - b. Instruction by lecture-table demonstrations, to be used mainly as a basis for questioning upon the general principles involved in the pupil's laboratory investigations.
 - c. Individual laboratory work, comprising at least forty exercises distributed about as follows: mechanics 17, sound 3, heat 5, light 6, electricity 9.

A list of suitable experiments in physics is contained in the definitions of the requirements published by the College Entrance Examination Board and may be obtained upon application to the Secretary of the Board, Post-Office Sub-Station 84, New York, N. Y.

LABORATORY NOTE-BOOK.—Every candidate must present *at the time of her examination in physics* a note-book in which she has recorded the steps and the results of her laboratory experiments. A candidate who fails to present such a note-book cannot receive credit for the examination. Each note-book must contain an index of the experiments which it describes, and must be endorsed by the instructor, the endorsement being written in ink on the inside of the cover. The endorsement must in effect be as follows:

I certify that this note-book is a true and original record of experiments actually performed by.....
in the physical laboratory of.....School
during the year 19

Instructor in Physics.

Advanced (counting one point)

Candidates offering physics as an advanced subject must have studied physics for a full year after satisfactorily completing the elementary requirement. The work during this time must be devoted to a more thorough and extensive study of the subjects previously covered in a general way, in a course equivalent to that known as Physics 11-12 (see courses announced by the Department of Physics).

PHYSIOGRAPHY (counting one point)

The candidate's preparation in physiography should include the study of one of the modern text-books by Davis, Tarr, Dryer, or Gilbert and Brigham, together with an approved laboratory and field course of at least forty exercises actually performed by the candidate.¹

The candidate will be required to present at the time of her examination the original note-book in which she recorded, with dates, the steps and results of her laboratory exercises. This book, which should contain an index of subjects, must bear the endorsement of the teacher, certifying that it is a true record of the candidate's work.

SPANISH (counting two points)

THE AIM OF THE INSTRUCTION.—At the end of the course the pupil should be able to pronounce Spanish accurately, to read at sight easy Spanish prose, to put into Spanish simple English sentences taken from the language of everyday life, or based upon a portion of the Spanish text read, and to answer questions on the rudiments of the grammar, as defined below.

THE WORK TO BE DONE.—During the first year the work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the conjugation of the regular and the more common irregular verbs, the inflection of nouns, adjectives, and pronouns, and the elementary rules of syntax; (3) exercises containing illustrations of the principles of grammar; (4) the reading and accurate rendering into good English of from 100 to 175 duodecimo pages of graduated texts, with translation into Spanish of easy variations of the sentences read; (5) writing Spanish from dictation.

During the second year the work should comprise: (1) the reading of from 250 to 400 pages of modern prose from different authors; (2) practice in translating Spanish into English, and English variations of the text into Spanish; (3) continued study of the elements of grammar and syntax; (4) mastery of all but the rare irregular verb-forms and of the simpler uses of the moods and tenses; (5) writing Spanish from dictation.

Suitable texts for the second year are: Valera's *El pájaro verde*; Alarcón's *El final de Norma*, *El capitán Veneno*; Valdès's *José*; Galdós's *Doña Perfecta*; *Marianela*; Padre Isla's version of *Gil Blas*; Carrion and Aza's *Zaragüeta*.

ZOÖLOGY (counting one point)

In general, zoölogy is not recommended as an entrance subject unless the study has been preceded or accompanied by that of physics and

¹ For a more detailed statement of the requirement in physiography the reader is referred to the definitions of the requirements published by the College Entrance Examination Board, Post-Office Sub-Station 84, New York, N. Y.

chemistry, which form the most desirable groundwork for collegiate courses in biology. The entrance examination in zoölogy is designed to test, first, the candidate's practical acquaintance with the natural history, structure, and relationships of some of the leading types of animals, and, second, her knowledge of the more essential facts of physiology.

Practical Zoölogy. A practical examination on at least ten common animal types, and the presentation by the candidate of a laboratory note-book, certified by the teacher as evidence of a laboratory course actually performed. Examples of the types suggested are the frog, fish, mollusk, insects, crustaceans, annelid, starfish, hydroid (*Hydra*), and protozoan. In the examination less weight is laid on a knowledge of anatomical *minutiæ* than on the ability to recognize the specimen and its allies, to indicate its relationships, and to point out the leading features of its life-history, organization, and physiology.

Elementary Physiology. The nature of foods and their history in the body; the essential facts of digestion, absorption, circulation, secretion, excretion, and respiration; the motor, nervous, and sensory functions; and the structure of the various organs by which these operations are performed. Martin's *Human Body* (briefer course) forms a suitable basis for this work; but teachers are recommended as far as possible to correlate the physiology of man and the higher animals with that of the lower forms studied in the course on practical zoölogy.

REGISTRATION AND ENROLMENT

REGISTRATION

No student is permitted to attend any academic exercise until she has complied with the regulations in regard to registration and payment of fees. A matriculated student is one who has been accepted as a candidate for a degree by the properly constituted academic authorities. Students enrolled at Barnard College are not, necessarily, matriculated. Every student will be required, as a condition of admission, to furnish such personal information as the College may need for its records. The proper blank for this purpose will be provided by the Registrar's Office.

ENROLMENT FOR COURSES

New students, at the date of registration, are required to file a statement of the courses which the Dean has authorized them to pursue. Students already in college are required to give notice to the Dean, on or before Monday, June 5, 1905, and on or before Tuesday, February 6, 1906, their choice of elective courses for the ensuing half-year. Proper blanks for this purpose will be provided by the Registrar's Office.

Students should not confuse the filing of elective blanks with registration.

The office of the Registrar will be open for registration from Wednesday, September 20, to Tuesday, September 26, 1905, and from Wednesday, January 31, to Tuesday, February 6, 1906. New students may register also on Wednesday, September 27, 1905, or on Wednesday, February 7, 1906. Registration at a later date is permitted only to candidates who obtain the written consent of the Dean, satisfactory cause for the delay having been shown. Such permission, however, does not relieve the student from the payment of the fee of \$5 for late registration.

Students who are prevented, through no fault of their own, from completing their registration in due time, should file a provisional registration-record on or before the last day of registration, if they wish to avoid the payment of this additional fee.

Credit for attendance will date from September 27, 1905, or from February 7, 1906. All students will be held strictly accountable for absences incurred owing to enrolment at a later date.

Every student who holds a scholarship or is receiving the benefit of free or reduced tuition must obtain from the Dean a certificate to that effect. This certificate must be handed to the Bursar at the time of registration.

HONORABLE DISMISSAL

An honorable discharge shall always be granted by the Dean to any student of good standing, over twenty-one years of age, who may desire to withdraw, and, with the written assent of her parents or guardian, to a student under that age.

GENERAL STATEMENT REGARDING FEES AND THE REGULATIONS GOVERNING THEIR PAYMENT

All fees are payable in advance at the Bursar's Office. Every student who fails to register within the limits of time fixed by the regulations of the University shall be permitted to register only with the consent of the Dean, and by the payment of an additional fee of \$5. Students who enter late are required to pay the full charge for tuition for the half-year in which they register.

Two stated examination-periods occur in each year, one at mid-year, and one at the close of the academic year. All other examinations are special examinations for which a fee of \$5 is charged. If a student is granted special examinations in a series of subjects under one permit from the Dean, a single fee shall cover them all.

The registration or matriculation fee must be paid at the time of entrance before an official record of a student's attendance can be noted. The annual fees for matriculated students are payable in equal instalments on or before the third Saturday of the academic year, and on or before the second Wednesday of the second half-year in each academic year.

Checks should be made payable to the order of Barnard College, and addressed to the office of the Bursar.

WITHDRAWAL

Students are requested in cases of withdrawal from the College during the academic year to notify the Registrar in writing without delay. No application for a return of fees can be considered unless such notice is given.

FEES

For Matriculation \$ 5 00

Required of all regular and matriculated special students who have been accepted as candidates for a degree. This fee is paid but once and is never refunded. If an entrance examination fee is paid in September or in February, and the student is admitted within the nineteen months following, the examination fee shall then be considered as meeting this requirement.

For Registration	\$5 00
Required of all non-matriculated students entering for the first time. If a non-matriculated student is later accepted as a candidate for a degree, this registration fee shall then be considered the same as a matriculation fee.	
For tuition for the degree, for each half-year	75 00
Students not candidates for a degree are charged at the rate of \$7.50 a half-year for each hour of attendance per week on lectures or recitations, with a maximum fee of \$75 for each half-year.	
In estimating a fee in laboratory work, two hours are counted as one.	
For examinations for the degree	15 00
For any examination other than those offered at the mid-year and final-examination periods	5 00
For laboratory work:	
Botany (Courses 51, 52, 53, 54, 55, 56), each course	1 25
“ (Courses 153, 154, 156, 158, 159, 160, 161, 162), each course	2 50
Chemistry (Courses 5, 6), each course	2 50
“ (Courses 63, 64), each course	6 00
“ (Courses 43, 44, 145, 146), each course	10 00
Geography (Courses 1, 2), each course	1 00
Zoölogy (Courses 1a, 2a, 1b, 2b), each course	2 50
Should Course 1b be taken in connection with Course 1a, or Course 2b be taken in connection with Course 2a, the one fee covers both courses.	
Zoölogy (Courses 101, 102, 151, 152, 153, 154), each course	2 50

ESTIMATED NECESSARY EXPENSES

Board, \$7 to \$12 a week.

Matriculation fee, \$5.

Annual tuition fee, \$150.

Text-books, from \$10 to \$20 each year.

Final examination for the degree, \$15.

The total necessary expenses for a student for the academic year are believed to average about \$15 a week.

DORMITORY

From October, 1898, to June, 1902, Fiske Hall was used as a residence for students. This building was given by Mrs. Martha T. Fiske-Collord for a Hall of Science, and was only temporarily used as a dormitory.

The rapid growth of the student body forced the Trustees to remodel the building according to the original plan. It was therefore discontinued as a dormitory after July 1, 1902, and was remodeled into laboratories and lecture-rooms.

The Trustees feel that the dormitory added a most desirable influence to the college life, and voted to take steps to provide a permanent and separate dormitory as soon as possible.

In the meantime, provision is made in the Teachers College Dormitory for such Barnard College students as may desire to reside there, by which certain unity of college life may be maintained until the College shall have its own permanent dormitory.

Applications for information and for rooms should be made to the Director of the Teachers College Dormitory, 1230 Amsterdam Avenue, New York, N.Y.

All students who do not live with adult relatives or in the Teachers College Dormitory must have the approval of the Dean to their arrangements for residence.

THE PROGRAM OF STUDIES

Upon completion of a curriculum arranged on the plan to be described below, the student is recommended by the Faculty of Barnard College for the degree of Bachelor of Arts.

The principles of the new program of studies are as follows:

1. The requirement for graduation is 120 points, the term "point" signifying the satisfactory completion of work requiring attendance one hour a week for one half-year.
2. Studies are either "prescribed," *i. e.*, obligatory upon all candidates for a degree; or "elective," *i. e.*, to be taken (though with certain restrictions) at the pleasure of the student.
3. Prescribed studies, with the exception of Economics A, must be taken as far as practicable during the first two years of residence; and subjects taken in college which are continuations of subjects offered at entrance must be taken as far as possible in the first year.
4. Other courses than those specified under each half-year may be taken by students qualified to pursue them with advantage, but in every case only with the consent of the Dean.
5. No combination of courses amounting to less than 12 or more than 16 points may be made in any half-year without the consent of the Dean.
6. No 1-point course, unless taken in connection with and as a supplement to a cognate course, will be allowed.
7. No more than four hours of work, exclusive of laboratory work, may be taken on the same day.
8. At least 9 points, exclusive of prescribed work, must be made under some one department before graduation.
9. Admission to courses depends strictly upon completion of the

prerequisites as stated for each course separately. Where no prerequisite is stated the course may be taken and counted for a degree by any student of the college.

10. To be recommended for a degree, a student must have made at least 84 points in actual college residence, and of these at least 24 in Barnard College. (The Faculty has power to suspend this rule in individual cases; but a Statute of the University forbids the granting of a degree to any person who has not been a member of the University for a full academic year, *i. e.*, two half-years.)

11. All requirements for the degree of Bachelor of Arts must be fulfilled by the candidate within six years from the time of her first matriculation as a freshman in college, whether at Barnard or elsewhere; within four and a half years from similar matriculation as a sophomore; within three years from similar matriculation as a junior; and within one and a half years from matriculation as a senior. If the candidate fails to satisfy the requirements within the time as here specified, she shall lose credit for all the points gained by her towards the degree, unless, in individual cases properly attested, the Faculty shall otherwise direct.

12. No extension courses, taken either at Columbia or elsewhere by a matriculated student, shall be credited towards the degree of Bachelor of Arts.

13. Change of electives will be allowed by the Dean, for reasons of weight stated to her in writing, during, but not later than the first two weeks of each half-year.

Before final choice of elective studies, all students should consult the Dean, and, in case of any doubt, the instructors in charge of particular courses as well. Electives must be chosen on some consistent plan, not merely at random. Conflicts between courses falling at the same hours are to be avoided by careful study of the Scheme of Attendance (see p. 84), which has been drawn up with a view to making possible for every one the selection of a reasonable number of harmonious elective courses that shall not conflict in hours with each other or with prescribed courses. It often happens that some of the courses of one department form valuable supplements to certain courses of another, so that combinations of work under two or more departments are very desirable. In all such cases the best selections can be made only after consultation with officers of one or more of the departments concerned. This applies particularly to the regulation that 9 points, exclusive of prescribed work, must be made in some one department.

PRESCRIBED COURSES

The prescribed courses are as follows:

English A and B.....	12 points
French A and German A (unless their equivalents are offered for admission).....	12 "

History A.....	6 points
Latin A or B (unless Advanced Latin has been offered for admission).....	6 “
Mathematics A (unless Advanced Mathematics has been offered for admission).....	6 “
Philosophy A.....	6 “
Economics A.....	3 “
Chemistry 5-6 or Physics 11-12 (unless an equivalent is offered for admission).....	6 “
Botany, Chemistry, Geology, Physics, Psychology (Experimental), or Zoölogy: two half-year courses in addition to the foregoing requirement in Physics or Chemistry.....	6 “
Hygiene A	

ADDITIONAL CREDIT FOR HIGH STANDING

At the end of every half-year, when all the reports are filed in the Registrar's Office, additional credit for high standing is given as follows:

The mark A in any two courses (no course to be counted twice) entitles the student to one point of extra credit, provided she has not fallen below the mark B in any of the courses pursued by her during the half-year.

Any student who is credited with 94 points (including all prescribed work) may receive one point of extra credit for each of two courses chosen from among those offered by any single department as counting toward a higher degree,¹ provided the quality of her work in such course be tested by an essay for which a mark of A or B is given, in addition to the stated examinations. No student may receive more than one point of extra credit in one half-year under the terms of this rule.

EXAMINATIONS IN COURSE

Two examinations of all the classes are held every year, one beginning on the last Wednesday but one of the first half-year (January 24, 1906), and the other on the Wednesday of the third week preceding Commencement (May 23, 1906). These are, and they are the only, *stated examinations*.

All students, except seniors, who shall have been absent from more than one tenth of the exercises in any course during a single half-year shall not be entitled to attend the stated examination in that course. Each instance of tardiness shall be counted as half an absence.

Should a student not exceed the limit of absence allowed, no explanation of any of her absences is required; should a junior or a sophomore exceed the limit allowed in any course, she shall be debarred

¹*I. e.*, Master of Arts or Doctor of Philosophy. Such courses are those offered under the Faculty of Political Science, the Faculty of Philosophy, or the Faculty of Pure Science primarily for graduate students, but open also to advanced undergraduates.

from the stated examination in that course, and may attend it only by consent of the Dean, given after written explanation to her of all absences in excess of one tenth of the number of exercises in the course; should a freshman or a special student exceed the limit allowed in any course, she shall be debarred from the stated examination in that course, and may attend it only by consent of the Dean, given after written explanation to her of every absence.

Every student is expected and required to keep an account of her absences, and any satisfactory explanation of them must be from records made at the times of their occurrence, and for dates noted by the student herself and not obtained by her from the instructor in charge.

Delinquent examinations as defined in a subsequent paragraph, and examinations held by special permission of the Dean are *special examinations*.

The fee for a special examination is \$5, which must be paid by the student before being admitted to the examination. If a student has special examinations in more than one subject granted her under one permit from the Dean, a single fee of \$5 shall cover them all.

Delinquent examinations, to enable deficient and debarred students of all classes to make good their deficiencies, are held within the two weeks immediately preceding the opening of the college in the fall; and in addition, for members of the senior class only, during the first week in May.

Except as provided for in the foregoing paragraph on delinquent examinations, a student found deficient at a stated examination will not be allowed a special examination in that subject.

Except as provided for in the paragraph on delinquent examinations, a student absent from a stated examination in any subject will be allowed a special examination in that subject only when the absence was due to unavoidable circumstances. In that case the Dean may, on proper written certification to her of the circumstances, grant a special examination.

ADVANCEMENT

At the close of every half-year, and after the stated examination has been held, each officer of instruction shall report to the Dean a list of all the students in his several courses, classifying them in five grades, namely, A, B, C, D, F, according as their work in the course has been excellent, good, fair, poor, or a failure.

A student who receives a mark of F in any prescribed course must repeat that course. A student who receives a mark of F in any course not prescribed may present herself for re-examination at the time fixed for the delinquent examinations; on passing such examination she shall receive only a mark of D. In either case, however, if the mark of F was given by reason of absence from examination resulting from illness or other unavoidable cause, she may be examined by

permission of the Dean and marked as though she had attended the regular examination.

In any half-year not more than one course, whether prescribed or elective, in which the student is marked D, may be counted toward a degree. Of several courses in which she is marked D she may choose the one to be so counted. In all cases the requirements as to prerequisites must be completed before the beginning of the academic year.

No student may be advanced from the freshman to the sophomore class until she shall (a) have satisfied all the requirements for entrance, and (b) have not less than 18 points to her credit.

No student may be advanced from the sophomore to the junior class until she shall have not less than 48 points to her credit.

No student may be advanced from the junior to the senior class until she shall have accomplished all the studies of the course specifically required in the first three years, and have not less than 90 points to her credit.

A student dropped from the roll of her class will not be permitted to attend any of the exercises of the said class without the consent of the Dean, given for reasons of weight; but she may enter the next succeeding class and pursue the course or courses in which her deficiency exists, or, in case of elective courses and with the consent of the Dean, other course or courses equivalent thereto in time, and present herself for examination in such course or courses with that class. No student dropped from the roll of her class under the provisions of this section will be accepted as a special student.

Should a student fail of advancement in two successive years, she shall be dropped from the roll of the college, unless, for reasons of weight, the Dean shall otherwise determine. No student dropped from the roll of the College under the provisions of this section will be accepted as a special student.

TEACHERS COLLEGE DIPLOMA

The course of study in Teachers College for those that intend to teach in secondary schools is so arranged that students of Barnard College may, if they so desire, obtain the diploma of Teachers College at the time of receiving the degree of Bachelor of Arts. Details as to these courses will be found in the Announcement of Teachers College, which will be sent on application to the Secretary of Teachers College.

SCHOLARSHIPS

NUMBER AND VALUE.—There are altogether forty scholarships and two special funds for the aid of needy and deserving students. The value of each of these scholarships, unless otherwise stated, is \$150 annually, which sum is applicable to the fees of the year. Under certain circumstances those scholarships known as Student Scholarships may be divided between two applicants.

CHARACTER.—The scholarships are of two sorts, competitive and non-competitive. The former are awarded for excellence in entrance examinations on the nomination of the Committee on Admissions. The latter are awarded by the Committee of the Trustees on Scholarships, on the nomination of the corresponding Committee of the Faculty, to worthy students who have passed at least one year in college. They are held, unless otherwise stated, *for one year only*.

CONDITIONS.—Two scholarships may not be held by the same person. Should two scholarships be assigned to the same student in one year, she must at once make choice as to which she will retain. If a student fail to maintain a grade of at least C in all courses which she pursues or if she commit a breach of good order, she shall forfeit her scholarship and, in the case of non-competitive scholarships, shall be ineligible for reëlection the following year.

APPLICATION.—Before the first of April of each year all applications for non-competitive scholarships, accompanied with full credentials, must be filed at the Dean's office upon special blanks to be obtained there. Candidates for the competitive scholarships to be awarded on the basis of the June examinations should, when filing an application with the Secretary of the College Entrance Examination Board (see p. 19), notify the Secretary of that Board for which one of the Barnard College Scholarships they are competing.

COMPETITIVE SCHOLARSHIPS

These, subject to the foregoing general regulations for scholarships, are as follows:

* 1. *Open to all Students:*

Trustees' Competitive Scholarship 1

Awarded annually by the Board of Trustees to the student who, in June, passes the best complete entrance examination in all subjects. It may be held for one year only.

Jessie Kaufmann Scholarship 1

Established in 1902 by Mr. Julius Kaufmann in memory of his daughter, Jessie Kaufmann. The annual income from \$4000 is awarded on the merits of the entrance examinations to a student who, after careful investigation, is found to have no relative able to assist her financially. It may be held for the entire college course.

2. *Open to Particular Students:*

Brooklyn Scholarships 12

Founded in 1895 by the Trustees of Columbia University in recognition of the gift to Columbia University by President Low of a memorial building for the university library. They are open to students who have received their training in either the public or the private

schools of Brooklyn, N. Y., and are residents of that city. Three of these scholarships will be awarded annually to qualified competitors who pass in June, without conditions, the best complete entrance examinations in all subjects. They may be held for the entire college course, but a holder, while retaining the title "Brooklyn Scholar," may transfer the income to any properly qualified candidate from Brooklyn without having her action made a matter of public record.

Lucille Pulitzer Scholarships..... 3

Founded by Mr. Joseph Pulitzer in memory of his daughter, Lucille Pulitzer. They are awarded to undergraduate students entering the college from the city of New York who are found to have passed excellent entrance examinations and to be worthy of financial aid. They may be held for the first three years of the college course only.

The first, founded in 1899, is the income of \$10,000, and will be awarded in 1906, 1909, and corresponding years. The second and third, given in 1903, represent each one half the income of \$15,000, and will be awarded in 1905 and 1907, respectively, 1908 and 1910, and corresponding years.

NON-COMPETITIVE SCHOLARSHIPS

These, subject to the general regulations for scholarships, are as follows:

1. *Open to all Students:* .

Student Scholarships..... 12

Given by the Committee of the Trustees on Scholarships. They are supported by the income of a permanent fund that is being established and that at present amounts to \$9680 and of the Arthur Brooks Fund (see below). The remainder is supplied by annual provision.

Ella Weed Scholarship..... 1

Founded by the pupils of Miss Anne Brown's School in memory of Miss Ella Weed, who was Chairman of the Academic Committee of the Board of Trustees of Barnard College during the first five years of its existence.

Veltin School Scholarship..... 1

Given by the alumnae of Mlle. Veltin's School.

Jennie B. Clarkson Scholarship..... 1

Founded in 1898 by Mrs. W. R. Clarkson.

Emily James Smith Scholarship..... 1

Founded in 1899 by Miss Emily H. Bourne in honor of Miss Smith, then Dean of Barnard College. It is awarded in conference with the founder.

- Anna E. Barnard Scholarship..... I
 Founded in 1899 by Miss Emily H. Bourne in honor of
 Mrs. John G. Barnard. It is awarded in conference with
 the founder.
- Brearley School Scholarship... I
 Founded in 1899 by pupils and former pupils of the
 Brearley School.
- Eliza Taylor Chisholm Memorial Scholarship..... I
 Founded in 1901 by the Alumnae Association of Miss
 Chisholm's School, which association reserves the privilege
 of precedence for such candidates as it may recommend.
- Graham School Scholarship..... I
 Given in 1901 by the Graham Alumnae Association.
2. *Open to Particular Students:*
- Mrs. Donald McLean Scholarship..... I
 Given in 1898 by the New York Chapter of the Daugh-
 ters of the American Revolution. It is awarded, in con-
 ference with a representative of the Chapter, to a deserving
 student who agrees to pursue the study of history (chiefly
 that of the United States) continuously throughout her
 college course.
- Emma Hertzog Scholarship..... I
 Founded in 1904 by gifts from residents of Yonkers, N. Y.
 It is awarded, in conference with the Faculty of the
 Yonkers High School, to a graduate of that school.
- Mrs. Henry Clarke Coe Scholarship..... I
 Given in 1904 by the National Society of New England
 Women. It is awarded, in conference with the President
 of the above Society, to a student from New England or
 of New England parentage.
3. *Special Funds for the Aid of Needy and Deserving Students:*
- Arthur Brooks Fund.
 A fund of \$5000 given in 1897 by Miss Olivia E. Phelps
 Stokes as a memorial of the Reverend Arthur Brooks, D.D.,
 Rector of the Church of the Incarnation and Chairman of
 the Board of Trustees of Barnard College during the first
 six years of its existence. This fund is at present applied
 to the maintenance of the Student Scholarships.
- Fiske Scholarship Fund.
 A sum of \$240, the income of a fund given by Mrs.
 Martha T. Fiske-Collord, placed at the disposal of the
 Dean of Barnard College.

PRIZES

GENERAL CHARACTER AND REGULATIONS.—The following prizes are
 awarded annually, on the recommendation of the appropriate de-
 partments of the Faculty of Barnard College, in accordance with the

special conditions named below. No prize will be awarded to any student who falls below grade O in any course during the year in which she is a competitor.

HERRMAN BOTANICAL PRIZE

A prize of \$50, founded by Mrs. Esther Herrman, is awarded annually to the most proficient undergraduate student in botany.

KOHN MATHEMATICAL PRIZE

A prize of \$50, founded by Mrs. S. H. Kohn, is awarded annually to a senior for excellence in mathematics. Competitors for this prize must have pursued mathematics continuously during their college course.

THE BUNNER MEDAL

The H. O. Bunner Gold Medal, established by the friends of the late Henry Cuyler Bunner, is awarded annually at Commencement to the candidate for a Columbia degree who shall present the best essay on an assigned subject in American literature. The award will be made by a committee to be appointed by the President. The subject for the essay to be handed in May 1, 1905, is "American Tragedy"; for 1906, "Thomas Jefferson as a Man of Letters"; for 1907, "The Hartford Wits."

HONORS

Honors are of two kinds, departmental and general honors.

Departmental honors will be granted in any year in any department for high excellence in courses of that department. Such excellence shall be indicated by the grade of A obtained in courses aggregating at least six points and by the satisfactory performance of additional work set by the department.

No student, except by special decision of the Committee on Honors, will receive honors in any department if she has received a mark lower than O in any of the courses taken by her during the year in which she is a candidate for honors.

A student who has won honors in any department successively during the last three years of her collegiate residence, or who, during her senior year, has submitted an essay that in the opinion of the department is sufficiently meritorious, shall be granted at graduation highest final honors in said department.

General honors will be granted at the end of every college year to students who during the said year have obtained grade A in the majority of the courses taken by them, provided they have not fallen below grade B in any course in said year.

Highest final general honors will be granted at graduation to all students who have obtained grade A in the majority of the courses taken by them during the last three years of college residence, provided they have not fallen below grade B in any course in said years.

Students who wish to be candidates for honors in any department must announce their candidacy to the head of said department not later than the first of April in the year in which they desire to compete for honors.

THE UNIVERSITY LIBRARY

The University Library is open each week-day (except Thanksgiving, Christmas, Good Friday, and Independence Day) from 8.30 A.M. until 11 P.M., October-June; and until 10 P.M., July-September. All officers, students, and graduates of all departments of the University have free access to the Library and may draw books for home use.

About 10,000 carefully selected reference books and the most important works on all subjects, in standard editions, representing the leading authors in all literatures, are placed in the general reading-room directly accessible to all readers.

The Library contains over 365,000 volumes, exclusive of unbound pamphlets and duplicates, and some 30,000 German dissertations.

The entire Library is carefully and accurately catalogued both by authors and subjects. The catalogue is on cards accessible to readers.

CHAPEL SERVICE

Chapel service is held on Tuesday and Friday of each week at half-past twelve in the college assembly-room. The service lasts about twenty minutes and is usually conducted by some clergyman of the city or by some officer of the University. Attendance is entirely voluntary.

STATISTICS

The following tabular statement indicates the growth of the College from its foundation:

	1889 to 1890	1890 to 1891	1891 to 1892	1892 to 1893	1893 to 1894	1894 to 1895	1895 to 1896	1896 to 1897	1897 to 1898	1898 to 1899	1899 to 1900	1900 to 1901	1901 to 1902	1902 to 1903	1903 to 1904	1904 to 1905
UNDERGRADUATES:																
Seniors.....	..	..	..	8	7	9	18	21	22	24	40	52	51	50	78	83
Juniors.....	..	..	7	7	9	18	21	22	23	24	40	39	48	74	79	71
Sophomores.....	..	8	7	10	20	18	22	21	28	38	37	51	72	78	72	75
Freshmen (regular).....	4	7	16	26	23	26	20	21	38	45	54	81	98	92	101	110
" (partly regular)	10	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	14	19	30	51	59	71	81	85	111	131	171	223	269	294	330	339
GRADUATE STUDENTS.....	..	12	5	5	18	19	33	49	58	75	82	..	..	..	..	..
SPECIAL STUDENTS.....	..	..	..	..	..	..	..	45	38	28	21	41	27	36	31	27
Botany.....	12	17	22	30	22	26	19	..	..	..	..	..	..	..	..	..
Chemistry.....	10	5	5	2	7	3	3	..	..	..	..	..	..	..	..	..
Political Science.....	..	..	..	..	..	..	11	..	..	..	..	..	..	..	..	..
Music Students.....	..	..	..	..	..	..	..	24	20	37	41	37	43	29	41	..
STUDENTS FROM TEACHERS	..	..	..	..	..	..	..	..	7	8	18	54	47	45	47	77
COLLEGE.....	..	..	..	..	..	..	..	..	..	..	..	29	45	41	51	62
STUDENTS FROM COLUMBIA	..	..	..	..	..	..	..	..	..	..	..	161	162	151	170	166
UNIVERSITY.....	22	34	32	37	47	48	66	118	123	148	162	..	..	..	..	..
TOTAL REGISTRATION.....	36	53	62	88	106	119	147	203	234	279	333	384	431	445	500	505
DEGREES CONFERRED:																
A.B.....	..	..	..	8	7	8	18	22	22	21	39	50	50	47	79	..
A.M.....	..	..	..	..	2	1	9	11	11	16	18	..	..	..	..	..
Ph.D.....	..	..	..	..	..	1	..	..	2	2	1	..	..	..	..	..

DEPARTMENTAL STATEMENTS

The following general regulations apply to all courses:

When an announced course has not been applied for by at least three candidates for a degree, the instructor may withdraw it.

Where the hours for laboratory work are not given either in the departmental statement or in the scheme of attendance, they must be arranged after consultation with the officer in charge of the course.

When courses are divided into sections, assignment is by alphabetical order; but for reasons of weight students may be transferred from the assigned section by the Dean.

Prescribed courses are designated by capital letters. Elective courses are designated by numbers, odd numbers for the first half-year courses and even numbers for the second half-year courses. A compound course is therefore designated by an odd number and the succeeding even number. The numbers from 1 to 99 inclusive are given to courses open only to undergraduates; the numbers from 101 to 199 inclusive are given to courses open to both undergraduates and graduates; the lower numbers in each case being used for the introductory courses.

In the statement of each course the prerequisites are indicated, except that the equivalent of the first half of a hyphenated course (e. g., Anthropology 101-102) is always assumed to be a prerequisite for admission to the second half. When no department is named it is to be assumed that the reference is to a numbered course in the same department.

Courses marked with an asterisk (*) are given at Columbia University and, with the exception of courses in Music, are open only to seniors. Courses marked with a dagger (†) are given at Teachers College, and, with the exception of courses in Geography, are open only to juniors and seniors.

For more detailed information in regard to topics, text-books, or methods, in any particular course, students are referred to the instructors.

ANTHROPOLOGY

101-102—General Introductory Course. Professor FARRAND. Four points for the year.

M. and W. at 1.30.

Open to Juniors and Seniors.

The first half of this course will cover a description of human races and of their distribution, a discussion of the physical characters of the earliest human remains and their relations to present forms, and a description of types of languages and their geographical distribution. In the second half of the year there is a discussion of the mental development of primitive man, followed by a description of types of primitive culture, and an inquiry into the origin and development of particular phases of culture.

* **117-118—American Languages.** Professor BOAS. Four points for the year.

Tu. and Th. at 10.30.

* **121-122—The Statistical Study of Variation.** Professor BOAS and Dr. WISSLER. Two lectures and three hours of laboratory work. Six points for the year.

Tu. and Th. at 9.30; laboratory work, Saturday morning.

For fuller information regarding courses in the Department of Anthropology, students are referred to the Announcement of the Division of Philosophy, Psychology, and Anthropology.

ASTRONOMY

* **101-102—General Astronomy.** Professor POOR. Four points for the year.

Tu. and Th. at 11.30.

Prerequisite: Mathematics **A1-A2** and Physics **11-12**.

* **103-104—Spherical and Practical Astronomy.** Professor JACOBY. Two lectures and two hours of observatory work. Six points for the year.

M. at 9.30 and Th. at 10.30.

Prerequisite: Astronomy **101-102** and Mathematics **21**.

The hours of Course **103-104** may be changed if students electing the subject so desire.

For fuller information regarding courses in the Department of Astronomy, students are referred to the Announcement of the Division of Mathematical and Physical Science.

BOTANY

51-52—Elementary Botany. Professor RICHARDS and Miss LATHAM. Five hours, lectures, demonstrations, and laboratory work. Six points for the year.

Lectures M. and F. at 9.30. Demonstrations W. at 9.30.

Laboratory fee, \$2.50.

53-54—General Morphology and Development of Plants, Study of Types. Dr. HAZEN. Two lectures, four or six hours of laboratory work. Eight or ten points for the year.

Tu. and Th. at 10.30.

Laboratory fee, \$2.50.

Course **53-54** is not open to freshmen. It should ordinarily be preceded by **51-52**, but is open, on consultation with the instructor, to students of sufficient training who also either attend the lectures in **51-52** or elect the full six hours of laboratory work in Course **53-54**.

55-56—Morphology of Spermatophytes and Pteridophytes, Study of the Natural Orders. Dr. HAZEN. Four or six hours. Four or six points for the year.

Laboratory fee, \$2.50.

Prerequisite: Course **51-52** or Entrance Botany.

153—Anatomy of Vascular Plants. Professor RICHARDS. Two lectures and a minimum of six hours of laboratory work. Five points.

Tu. and Th. at 9.30.

Laboratory fee, \$2.50.

154—Physiology of Plants from Standpoint of Nutrition. Professor RICHARDS. Two lectures and a minimum of six hours of laboratory work. Five points.

Tu. and Th. at 9.30.

Laboratory fee, \$2.50.

Courses 154 and 156 are given in alternate second half-years.

[**156—Physiology of Plants from Standpoint of Growth.** Professor RICHARDS. Two lectures and a minimum of six hours of laboratory work. Five points.

Laboratory fee, \$2.50.

Not given in 1905-06.]

Courses 153, 154, and 156 are open to students only after consultation with the instructor.

158—Structure and Development of Algæ. Advanced course. Professor RICHARDS and Dr. HAZEN. One lecture and six hours of laboratory work. Four points.

Laboratory fee, \$2.50.

Prerequisite: Courses 51-52 and 53-54.

159—Structure and Development of Fungi. Advanced course. Professor RICHARDS. One lecture and six hours of laboratory work. Four points.

Laboratory fee, \$2.50.

Prerequisite: Courses 51-52 and 53-54.

Courses 158 and 159 are given either the first or second half-year to suit the convenience of the instructor and students. The two courses will not usually be given the same year.

160—Developmental Anatomy. Practice in methods of technique. Professor RICHARDS and Miss LATHAM. Eight hours of laboratory work with occasional lectures and outside reading. Four points.

Laboratory fee, \$2.50.

Prerequisite: Course 153; parallel: Course 154 or 156.

This course may be given in the first or in the second half-year.

161-162—Advanced Physiology and Morphology. Professor RICHARDS and Dr. HAZEN.

Work will be arranged to suit the needs of the students, and credit will be given according to the amount accomplished. Open to students only after consultation with the instructors.

Laboratory fee, \$2.50 for each half-year.

CHEMISTRY

Students are requested to elect courses in the following order; 5-6, 63, 64, 41-42 43-44.

5-6—General Inorganic Chemistry. Dr. REIMER and Miss KELLER. Two lectures and two hours of laboratory work. Six points for the year.

M. and W. at 11.30.

Laboratory fee, \$5.

41-42—Organic Chemistry, Elementary Lecture Course. Dr. REIMER. Two lectures. Four points for the year.

Hours to be arranged.

Prerequisite: Course 5-6. It is urged that Course 43-44 be taken with this course.

43-44—Organic Chemistry, Elementary Laboratory Course. Dr. REIMER. Eight hours. Eight points for the year.

Hours to be arranged.

Laboratory fee, \$20.

Prerequisite: Courses 5-6, 41-42. Recommended as a parallel to Course 41-42.

This course is designed to teach the student the important methods of preparation of organic compounds.

63—Qualitative Analysis. Miss KELLER. Three lectures and eight hours of laboratory work. Seven points.

Hours to be arranged.

Laboratory fee, \$6.

Prerequisite: Course 5-6.

64—Quantitative Analysis. Miss KELLER. Three lectures and eight hours of laboratory work. Seven points.

Hours to be arranged.

Laboratory fee, \$6.

Prerequisite: Courses 5-6 and 63.

145-146—Organic Chemistry, Advanced Course. Dr. REIMER. Three lectures and six hours of laboratory work. Twelve points for the year.

Hours to be arranged.

Laboratory fee, \$20.

Minor for A.M. or Ph.D. Prerequisite: Courses 5-6, 41-42, 43-44.

Major for A.M. when taken with additional laboratory work and with Chemistry 143-144 at Columbia University. Prerequisite: Courses 5-6, 41-42, 43-44, 63, 64.

This course is designed to supplement Courses 41-42 and 43-44. It is a more comprehensive discussion of the most important classes of organic compounds and their relations to each other. Special emphasis will be given to recent theories as to the structure of the compounds and the mechanism of their reactions. The laboratory work consists of the preparation of organic compounds discussed in the lectures and the study of their reactions, special emphasis being given to synthetical methods for building up the more complicated organic compounds occurring in nature.

ECONOMICS AND SOCIAL SCIENCE

Economics

A—Outlines of Economics. Study of the characteristics of modern industrial society and of the fundamental economic principles. Professors MOORE and JOHNSON. First half-year. Three points.

Section I, M., W., and F. at 10.30; Section II, M. and W. at 1.30, and F. at 10.30

Prescribed for Juniors. Open to qualified Sophomores who take Course 4.

4—Economic History of England and the United States, with constant attention to the evolution of present economic conditions and the rise of current social problems. Professors MOORE and JOHNSON. Three points.

M., W., and F. at 10.30.

Prerequisite: Course A or its equivalent.

105—The Labor Problem. Professor SEAGER. Two points.

Tu. and Th. at 1.30.

Prerequisite: Course A or its equivalent.

109—Communistic and Socialistic Theories. Professor CLARK. Two points.

Tu. and Th. at 11.30.

Prerequisite: Course A or its equivalent.

110—Theories of Social Reform. Professor CLARK. Two points.

Tu. and Th. at 11.30.

Prerequisite: Course A or its equivalent.

120—Practical Economics. Professor SEAGER. Two points.

Tu. and Th. at 1.30.

Prerequisite: Course A or its equivalent.

The topics discussed in this course include money, banking, taxation, government expenditures, foreign trade, monopolies and trusts, and the legal regulation of industries.

121—English Social Reformers. Professor MOORE. Two points.

W. and F. at 1.30.

Prerequisite: Course A or its equivalent.

122—The Recent Development of Economics in England, with a critical study of Marshall's Principles of Economics. Professor MOORE. Two points.

W. and F. at 1.30.

Prerequisite: Course A or its equivalent.

Sociology

151-152—Principles of Sociology. Professor GIDDINGS. Four points for the year.

Tu. and Th. at 2.30.

Prerequisite: Economics A or its equivalent.

[153-154—**Family Organization.** Field work in the study of family groups. Study of the sacred law codes. Consultations. Dr. ELSIE CLEWS PARSONS. Two points for the year.

Prerequisite or parallel: Course 151-152.

In connection with the lectures and field work of this course opportunities are given to students to become acquainted with the more important private institutions for social betterment in New York City, and to study the organization and activity of the various public agencies charged with the welfare of the community.

Not given in 1905-06.]

EDUCATION

Teachers College is the Division of Education of Columbia University. Detailed information with regard to its courses and the credit which may be received for them in partial fulfilment of the requirements for the several diplomas and degrees, will be found in the current edition of the Announcement of Teachers College, which can be obtained, without charge, upon application to the Secretary of the College.

Education A is prerequisite to all courses in education. Education B must be taken parallel with other courses in the Senior year.

† A(b)—**Educational Psychology.** Professor THORNDIKE and Dr. NORSWORTHY. Four points.

The class will meet together on M. at 4.30 throughout the year, and in sections during the second half-year as follows:

(I) M., W., and F. at 10.30, open to candidates for the Bachelor's diploma with a major subject in kindergarten, elementary, and secondary teaching.

(III) M., W., and F. at 3.30, open to collegiate students and others by permission of the instructor.

Attendance on the Monday section hour, a conference, is optional.

† B—**History and Principles of Education.** Professor MONROE and assistants. Six points.

Tu. and Th. at 3.30 and a third hour in sections.

(I) F. at 9.30 for candidates for a Bachelor's diploma with a major subject in secondary teaching.

(III) S. at 9.30 for candidates for a Bachelor's diploma with a major subject in elementary or kindergarten teaching.

(V) F. at 2.30 for students who obtain the consent of the instructor.

† 5-6—**Modern Educational Theory.** Professor MACVANNEL. Four points for the year.

Tu. and Th. at 2.30.

† 21-22—**Child Study.** Dr. NORSWORTHY. Four points for the year.

Tu. and Th. at 10.30.

† 31—**Fundamental Principles of Method.** Professor McMURRY. Four points.

Tu. and Th. at 4.30.

† 33-34—**Applications of Principles of Method.** Professor McMURRY and Mr. STRAYER. Six points for the year.

M., W., and F. at 9.30, and practical work to be arranged with the instructor before registration.

† 61—**Theory and Practice of Teaching English in Elementary Schools.** Professor BAKER. Four points.

(a) Class work, two points. M. and F. at 11.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: English A, and 1 and 2 or 5 and 6 or their equivalent.

† 68—**Theory and Practice of Teaching Geography in Elementary Schools.** Professor DODGE and Miss C. B. KIRCHWEY. Four points.

(a) Class work, two points. Tu. and Th. at 11.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: Geography 1-2 or its equivalent. Geography 3 is also recommended as a preliminary course.

† 74—**Theory and Practice of Teaching History in Elementary Schools.** Professor CASTLE. Four points.

(a) Class work, two points. M. and W. at 10.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: History A or 1-2.

† 79—**Theory and Practice of Teaching Mathematics in Elementary Schools.** Professor SMITH. Four points.

(a) Class work, two points. M. and W. at 3.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: Mathematics 1-2 or its equivalent.

† 83-84—**Practical Course in the Teaching of Nature Study.** Professors BIGELOW, DODGE, and WOODHULL. Four points for the year.

M. and W. at 11.30, and practice hours to be arranged with instructor before registration.

† 85—**Lectures on the Teaching of Nature Study.** Professors BIGELOW, WOODHULL, DODGE, and LLOYD. Four points.

Tu. and Th. at 11.30.

† 87—**Personal Hygiene.** Professor WOOD. Two points.

M. and W. at 11.30.

† 88—**School Hygiene.** Professor WOOD. Two points.

M. and W. at 11.30.

† 101-102—**Contemporary Educational Problems.** Dean RUSSELL and Professor MONROE, with the co-operation of President BUTLER, and special lecturers. Two points for the year.

W. at 4.30.

† 108—**Social Life and the School Curriculum.** Professor DEWEY. Two points.

Tu. and Th. at 4.30.

† 111-112—**School Administration.** Professor DUTTON. Four points for the year.

M. and F. at 4.30.

† 121-122—**Genetic Psychology.** Advanced course. Professor THORNDIKE. Four points for the year.

M. and W. at 11.30.

† 125-126—**Secondary Education.** Professor SACHS. Four points for the year.

Tu. and Th. at 4.30.

† 153-154—**Theory and Practice of Teaching Biology in Secondary Schools.** Professors LLOYD and BIGELOW. Six points for the year.

(a) Class work, four points. M. and W. at 3.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: at least 18 points in college biology, 6 points of which may be taken concurrently.

† 161-162—**Theory and Practice of Teaching English in Secondary Schools.** Professor BAKER. Six points for the year.

(a) Class work, four points. M. and W. at 9.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: at least 18 points in college English.

† 167-168—**Theory and Practice of Teaching Geography in Secondary Schools.** Professor DODGE and Miss C. B. KIRCHWEY. Six points for the year.

(a) Class work, four points. M. and W. at 3.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: 18 points in geography and geology, including Geography 5-6 and at least 4 points in geology.

† 169-170—**Theory and Practice of Teaching German in Secondary Schools.** Professor BAGSTER-COLLINS. Six points for the year.

(a) Class work, four points. M. and W. at 3.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: at least 18 points in college German.

† 171-172—**Theory and Practice of Teaching Greek in Secondary Schools.** Professor LODGE. Six points for the year.

(a) Class work, four points. Tu., Th., and F. at 1.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: at least 18 points in college Greek.

† 173-174—**Theory and Practice of Teaching History in Secondary Schools.** Professor CASTLE. Six points for the year.

(a) Class work, four points. Tu. and Th. at 9.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: at least 18 points in college history. Students are advised to elect courses in Greek and Roman, Mediæval, and United States History as fundamentals.

† 175-176—**Theory and Practice of Teaching Latin in Secondary Schools.** Professor LODGE. Six points for the year.

(a) Class work, four points. M., W., and F. at 1.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: at least 18 points in college Latin.

† 179-180—**Theory and Practice of Teaching Mathematics in Secondary Schools.** Professor SMITH. Six points for the year.

(a) Class work, four points. Tu. and Th. at 11.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: at least 18 points in college mathematics, including Mathematics 3-4.

189-190—**Theory and Practice of Teaching Physical Education.** Lectures and practical work. Professor WOOD, Dr. SKARSTROM, and Miss CRAWFORD. Six points for the year.

(a) Class work, four points. Tu. and Th. at 4.30.

(b) Practical work, two points. Hours must be arranged with instructor before registration.

† 191-192—**Theory and Practice of Teaching Physical Science in Secondary Schools.** Chemistry; physics. Professor WOODHULL. Six points for the year.

(a) Class work, four points. F., 1.30-3.30.

(b) Practical work, two points. Hours must be arranged with the instructor before registration.

Prerequisite: at least 18 points in college physics and chemistry.

ENGLISH

A1-A2—**English Literature and Composition.** Professor BREWSTER and Mr. TASSIN. Six points for the year.

Tu., Th., and S. at 10.30.

Prescribed for Freshmen.

A special section will be formed for students who enter college at the opening of the second term.

B1-B2—English Literature and Composition. Mr. PARKER and Miss BALL. Six points for the year.

Tu. and Th. at 1.30, and a third hour to be arranged.

Prerequisite: Course **A1-A2**.

Prescribed for Sophomores.

1-2—English Composition. Professor BREWSTER. Six points for the year.

Tu. and Th. at 11.30 and a third hour to be arranged.

Prerequisite: Course **B1-B2**.

With the permission of the instructor, this course may be taken in two successive years. The course may be elected or dropped at the end of the first term, but in no case may the second term be elected unless the student has passed at least once the work of the first half-year.

7-8—Elocution and Public Speaking. Mr. TASSIN. Three hours. Four points for the year.

M., W., and F. at 2.30.

[11-12—Argumentation. Miss GILDERSLEEVE. Six points for the year.

Prerequisite: Course **B1-B2**.

Not given in 1905-06.]

21-22—American Literature. Professor TRENT. Four points for the year.

M. and W. at 11.30.

23-24—English Literature in the Nineteenth Century. Miss HUBBARD. Six points for the year.

Tu., Th., and S. at 11.30.

[25-26—English Literature in the Seventeenth Century. Professor TRENT. Four points for the year.

Prerequisite: Course **21-22** or **23-24**.

Not given in 1905-06.]

Courses **25-26** and **27-28** are given in alternate years.

27-28—English Literature in the Eighteenth Century. Professor TRENT. Four points for the year.

M. and W. at 10.30.

Prerequisite: Course **21-22** or **23-24**.

29-30—English Literature of the Earlier Periods. Dr. KRAPP. Six points for the year.

M., W., and F. at 1.30.

Prerequisite: Course **21-22** or **23-24**.

35-36—Shakspeare. Professor NEILSON. Four points for the year. M. and W. at 11.30.

Prerequisite: Course **21-22** or **23-24**.

39-40—The Development of English Fiction. Professor BREWSTER. Four points for the year.

Tu. and Th. at 9.30.

Prerequisite: Course **B1-B2** and Course **21-22** or **23-24**.

Courses **39-40** and **41-42** are given in alternate years.

[41-42—The Development of the English Drama. Professor BREWSTER. Four points for the year.

Not given in 1905-06.]

45-46—English Literary Criticism. Professor G. R. CARPENTER. Four points for the year.

M. and W. at 9.30.

Open to Seniors only.

With the consent of the Dean certain courses in the Graduate School are open to specially qualified Seniors.

French. See **Romance Languages and Literatures**

GEOGRAPHY

† 1-2—General Geography. Professor DODGE. Lectures and laboratory work. Six points for the year.

Tu. and Th., 9.30-11.30; S., 9.30.

Laboratory fee, \$2.

Open to all undergraduate students.

† 3—Geography of the United States. Professor DODGE. Lectures and library work. Two points.

M. and F. at 2.30.

Prerequisite: Course **1-2** or its equivalent.

† 4—Commercial Geography for Schools. Professor DODGE. Lectures and library work. Two points.

M. and F. at 2.30.

Prerequisite: Course **1-2** or its equivalent.

† 5-6—Physiography and Climatology. Professor DODGE. Lectures, laboratory, and library work. Six points for the year.

M. and W. at 10.30; F., 10.30-12.30.

(For courses in Methods of Teaching Geography in Elementary and in Secondary Schools see **Education 68, 167-168.**)

GEOLOGY

101-102—General Geology. Physical, dynamical, structural, and historical geology. Dr. OGILVIE. Two lectures and two or four hours of laboratory and field work. Six or eight points for the year.

Tu. and Th. at 10.30.

Prerequisite, desirable but not essential: Chemistry **5-6** and Zoölogy **1-2**, and some knowledge of Mineralogy.

113—Summer Field Course. Dr. OGILVIE. Two weeks in the field, involving the subsequent preparation of a report. Four points.

Time to be arranged.

Prerequisite: Course 101-102 or its equivalent.

[115-116—Paleontology. A study of the invertebrate faunas of the various geologic periods in North America, embracing all the more characteristic types of each formation. Dr. OGILVIE. One lecture, two or four hours of laboratory work. Four or six points for the year.

Prerequisite: Course 101-102 and Zoölogy 1-2.

Not given in 1905-06.]

GERMANIC LANGUAGES AND LITERATURES

A1-A2—Elementary Course. Miss PERIAM. Six points for the year.

Section I, M., W., and F. at 10.30; Section II at 2.30.

Prescribed for Freshmen that did not present Elementary entrance German.

1-2—Intermediate Course. Reading, Grammar, and Composition. Mr. HEUSER and Miss PERIAM. Six points for the year.

Sections I and II, M., W., and F. at 1.30.

Prerequisite: Course A1-A2 or Elementary entrance German.

3-4—Selected Works of Goethe, Schiller, and Lessing. Texts, chiefly dramatic, and essays in German. Intended primarily for students who have not previously read works of these authors. Dr. BRAUN, Mr. HEUSER, and Miss PERIAM. Six points for the year.

Section I, M., W., and F. at 9.30; Section II at 10.30; Section III at 1.30.

Prerequisite: Course 1-2 or Intermediate entrance German.

5-6—Selected Works of Goethe, Schiller, and Lessing. Texts, and essays in German. Intended primarily for students who have some acquaintance with the works of these authors. Mr. HEUSER. Six points for the year.

M., W., and F. at 2.30.

Prerequisite: Course 1-2 or Intermediate entrance German.

7-8—Historical Prose. Selections from German historians, essayists, and critics. Dr. BRAUN. Four points for the year.

Tu. and Th. at 10.30.

Prerequisite: Course 1-2 or Intermediate entrance German.

9-10—Practice in Speaking and Writing German. Elementary Course. Talks and themes, all in German, upon linguistic and literary topics. Dr. BRAUN. Four points for the year.

Section I, Tu. and Th. at 1.30; Section II at 2.30.

Prerequisite: Course 3-4, 5-6, or 7-8.

11-12—Practice in Speaking and Writing German. Advanced Course. Talks and themes, all in German, upon linguistic and literary topics. Mr. HEUSER. Four points for the year.

Tu. and Th. at 1.30.

Prerequisite: Course 9-10, or its equivalent.

13-14—Selected Dramas of the 19th Century. Texts of representative dramatists, such as Kleist, Grillparzer, and Ludwig, reports and essays. Dr. BRAUN. Four points for the year.

Tu. and Th. at 9.30.

Prerequisite: Course 3-4, 5-6, or 7-8.

15-16—Geschichte der deutschen Litteratur im 19. Jahrhundert. Vorlesungen in deutscher Sprache. Mr. SEIBERTH. Four points for the year.

Tu. and Th. at 2.30.

Prerequisite: Course 3-4, 5-6, or 7-8.

[17-18—History of German Literature from the earliest times to the 19th century. Lectures, themes, and readings from Müller's *German Classics*. Professor THOMAS. Four points for the year.

Prerequisite: Course 3-4, 5-6, or 7-8.

Not given in 1905-06; given in 1906-07.]

19-20—Goethe's Faust; first and second parts. Lectures and recitations. Dr. BRAUN. Four points for the year.

W. and F. at 9.30.

Prerequisite: Course 3-4, 5-6, 7-8, or its equivalent.

[* 105-106—History of German Literature in the Nineteenth Century. Professor THOMAS. Four points for the year.

Prerequisite: Course 17-18, or its equivalent.

Not given in 1905-06; given in 1906-07.]

*** 107-108—History of the German Language.** Professor W. H. CARPENTER. Four points for the year.

M. and W. at 1.30.

Prerequisite: Course 3-4, 5-6, or 7-8.

[* 109-110—Old High German. Lectures and texts. Professor R. TOMBO, Jr. Four points for the year.

Prerequisite: Course 107-108, or its equivalent.

Not given in 1905-06; given in 1906-07.]

Courses 109-110 and 111-112 are given in alternate years.

*** 111-112—Middle High German.** Lectures and texts. Professor HERVEY. Four points for the year.

M. and W. at 2.30.

Prerequisite: Course 107-108, or its equivalent.

[* 113-114—Epochs of German Culture, with Special Reference to the Middle Ages. Lectures, themes, and readings. Professor HERVEY.

Prerequisite: Course 17-18, or its equivalent.

Not given in 1905-06; given in 1906-07.]

* 115-116—Old Saxon. Lectures and texts. Professor R. TOMBO, Jr. Four points for the year.

Tu. and Th. at 1.30.

Prerequisite: Course 107-108, or its equivalent.

* 129-130—History of German Civilization. Lectures and readings from sources. Dr. RICHARD. Four points for the year.

Tu. and Th. at 11.30

Prerequisite: Course 17-18, or its equivalent.

[* 117-118—Swedish. Elementary course. Professor THOMAS. Four points for the year.

Prerequisite: Course 3-4, 5-6, or 7-8.

Not given in 1905-06; given in 1906-07.]

[* 119-120—Danish. Elementary course. Professor THOMAS. Four points for the year.

Prerequisite: Course 3-4, 5-6, or 7-8.

Not given in 1905-06; given in 1907-08.]

* 121-122—Icelandic—Elementary course. Professor W. H. CARPENTER. Four points for the year.

Tu. and Th. at 3.30.

Prerequisite: Course 107-108, or its equivalent.

Courses 121-122 and 123-124 are given in alternate years.

[* 123-124—Icelandic. Advanced course. Professor W. H. CARPENTER. Four points for the year.

Prerequisite: Course 121-122, or its equivalent.

Not given in 1905-06; given in 1906-07.]

* 125-126—Dutch. Elementary course. Professor W. H. CARPENTER. Four points for the year.

M. and W. at 3.30.

Prerequisite: Course 3-4, 5-6, or 7-8.

* 127-128—Gothic. Lectures and texts. Dr. REMY. Four points for the year.

Tu. and Th. at 4.30.

Prerequisite: Course 107-108, or its equivalent.

GREEK

1-2—Elementary Course: Grammar, Composition, Xenophon's Anabasis, Homer's Iliad. Miss LAWRENCE. Five hours.

To be counted as six points for the year by such students as subsequently pass either the entrance examination in Elementary Greek or an equivalent examination.

M., Tu., W., Th., and F. at 2.30.

Prerequisite: Elementary entrance Latin.

This course may not be begun in the second half-year. It is designed for students that have entered without Greek but wish to include it in their course of study. Only those that are willing to work hard and unremittingly throughout the year will be admitted to the course. It is believed that such students will be qualified to enter Course 3 at the beginning of the following year.

3—Plato: Apology, Crito, and Euthyphro; Greek prose composition fortnightly. Miss HIRST. Three points.

M., W., and F. at 11.30.

Prerequisite: Course 1-2 or Elementary entrance Greek.

4—Homer: The Odyssey (selections); Greek prose composition fortnightly. Professor KNAPP. Three points.

M., W., and F. at 11.30.

Prerequisite: Course 1-2 or Elementary entrance Greek.

5—Euripides: Alcestis and Medea; required private reading. Professor EARLE. Three points.

M., W., and F. at 11.30.

Prerequisite: Course 3-4 or Advanced entrance Greek.

An additional hour weekly (Th. at 10.30) in Greek prose composition will be offered, and students that take this may count the course as four points.

6—Demosthenes: Olynthiacs and Philippics; required private reading. Miss HIRST. Three points.

M., W., and F. at 11.30.

Prerequisite: Course 3-4 or Advanced entrance Greek.

Prose composition as for Course 5.

21—Rapid Reading of Homer. Professor PERRY. Three points. Hours to be arranged.

Prerequisite: Course 1-2 or Elementary entrance Greek.

22—Rapid Reading of Homer, continued. Professor WHEELER. Three points.

Hours to be arranged.

Prerequisite: Course 1-2 or Elementary entrance Greek, except that, unless Course 21 have been already taken, 22 may not be elected without special permission from the head of the Department.

25—Sophocles: Antigone and Œdipus Tyrannus; private reading. Professor Earle. Three points.

M., W., and F. at 1.30.

Prerequisite: Course 3-4 or 21-22.

26—Thucydides (VI-VII): private reading. Professor KNAPP. Three points.

M., W., and F. at 1.30.

Prerequisite: Course 3-4 or 21-22.

27-28—Advanced Greek Prose Composition. Professor EARLE. One session weekly, with written exercises. Two points for the year. Th. at 2.30.

Prerequisite: Course 5-6 with Greek prose composition.

This course is meant to be a continuation of the Greek prose composition of Course 5-6. It may not be begun in the second half-year without special permission from the head of the Department.

29-30—New Testament Greek: Reading of the Gospel according to Luke and the Acts of the Apostles with special regard to the forms and idioms of Biblical Greek. Professor EARLE. Two points for the year.

Hours to be arranged.

Prerequisite: Course 5-6 or 21-22.

This course may not be begun in the second half-year without special permission from the head of the Department.

31—Plato: The Republic. Professor EARLE. Three points.

M., W., and F. at 2.30.

Prerequisite: Course 5-6 or 21-22.

32—Æschylus and Pindar (selections). Professor EARLE. Three points.

M., W., and F. at 2.30.

Prerequisite: Course 31.

(For Teachers' Course by Professor LODGE see Education 171-172.)

HISTORY

A1-A2—Epochs of Ancient, Mediæval, and Modern History with special reference to forms of government and changes in social conditions. Miss LOOMIS. Six points for the year.

Section I, Tu., Th., and S. at 9.30; Section II, Tu., Th., and S. at 10.30.

Prescribed for Sophomores, but may be taken as an elective by Freshmen.

[3-4—Greece and Early Rome. Professor BOTSFORD. Six points for the year.

Not given in 1905-06.]

Courses 3-4 and 5-6 are given in alternate years.

5-6—The Roman Empire. Professor BOTSFORD. Six points for the year.

M., W., and F. at 10.30.

Prerequisite: Course A1-A2.

7-8—Mediæval and Modern History to the Peace of Westphalia Miss LOOMIS. Six points for the year.

Tu. and Th. at 2.30, and Th. at 3.30.

Prerequisite: Course A1-A2.

This course covers practically the same period as Course 127-128, but treats different phases, viz., the political and social development.

[9-10—Continental and English History, modern and contemporaneous. Dr. BEARD. Six points for the year.

Prerequisite: Course A1-A2.

Not given in 1905-06.]

11-12—English History to the Reform Bill, 1832. Dr. BEARD. Six points for the year.

M., W., and F. at 2.30.

Prerequisite: Course **A1-A2**.

13-14—History of the United States to the Close of Reconstruction. Professor SHEPHERD. Six points for the year.

M., W., and F. at 11.30.

Prerequisite: Course **A1-A2**.

127-128—Intellectual History of Europe during the Middle Ages, Renaissance, and Protestant Revolution. Professor ROBINSON. Four points, or, with the permission of the Dean, six points for the year.

Tu. and Th. at 3.30.

Prerequisite: Course **7-8** or **11-12**.

[155-156—Constitutional History of England to 1689. Professor OSGOOD. Four points for the year.

Prerequisite: Course **11-12**.

Not given in 1905-06.]

Courses **155-156** and **157-158** are given in alternate years.

157-158—The History of England during the Eighteenth and Nineteenth Centuries. Professor OSGOOD. Four points for the year.

Tu. and Th. at 2.30.

Prerequisite: Course **11-12**.

169-170—Political and Constitutional History of the United States. Professor SHEPHERD. Four points for the year.

M. and W. at 2.30.

Prerequisite: Course **13-14**.

Italian. See Romance Languages and Literatures.

LATIN

A1—Livy: Books XXIII-XXIV; prose composition weekly. Miss HIRST and Miss LAWRENCE. Three points.

Sections I and II, M., W., and F. at 9.30.

Prescribed for Freshmen that do not take Course **B**, unless they have offered Advanced Latin as an entrance requirement.

A2—Horace: Odes (I and II); prose composition weekly. Miss HIRST and Miss LAWRENCE. Three points.

Sections I and II, M., W., and F. at 9.30.

Prerequisite: Course **A1**.

Prescribed for Freshmen as above.

B1—Cicero: De Senectute and De Amicitia; prose composition weekly. Miss HIRST and Miss LAWRENCE. Three points.

Sections I and II, Tu., Th., and S. at 9.30.

Prescribed as alternative of Course **A1**.

B2—Horace: Odes (III and IV); prose composition weekly. Miss HIRST and Miss LAWRENCE. Three points.

Sections I and II, Tu., Th., and S. at 9.30.

Prerequisite: Course B1.

Prescribed as alternative of Course A2.

1—Horace: Satires and Epistles. Professor EARLE. Three points. M., W., and F. at 10.30.

Prerequisite: Course A1-A2 or Course B1-B2.

2—Tacitus: Annals (III-VI). Miss HIRST. Three points. M., W., and F. at 10.30.

Prerequisite: Course A1-A2 or Course B1-B2.

3—Pliny: Epistles (selections). Miss HIRST. Two points. Tu. and Th. at 11.30.

Prerequisite: Course A1-A2 or Course B1-B2.

4—Catullus and Tibullus. Professor KNAPP. Two points. Tu. and Th. at 11.30.

Prerequisite: Course A1-A2 or Course B1-B2.

[Note to Courses 1-4: For Prose Composition see Course 21-22.]

5—Cicero: Tusculan Disputations. Professor MCCREA. Three points.

M., W., and F. at 11.30.

Prerequisite: Course 1-2 or Course 3-4.

6—Lucretius (selections). Professor MCCREA. Three points. M., W., and F. at 11.30.

Prerequisite: Course 5.

7—Terence: Adelphoe and Heauton Timorumenos. Professor KNAPP. Three points.

M., W., and F. at 10.30.

Prerequisite: Course 1-2 or Course 3-4.

8—Plautus: Rudens and Menæchmi. Professor KNAPP. Three points.

M., W., and F. at 10.30.

Prerequisite: Course 1-2 or Course 3-4.

21-22—Intermediate Latin Prose Composition. Professor EARLE. One session weekly with written exercises. Four points for the year. Th. at 3.30.

Prerequisite: Course A1-A2 or Course B1-B2.

This course may be appropriately joined with Course 1-2 or Course 3-4. It may not be divided without the consent of the head of the Department.

23-24—Advanced Latin Prose Composition. Professor KNAPP. One session weekly with written exercises. Four points for the year. Th. at 11.30.

Prerequisite: Course 21-22.

25-26—Latin Themes. Professor EARLE. One session weekly. Four points for the year.

Th. at 11.30.

Prerequisite: Course 23-24.

31—Cicero: De Officiis. Professor KNAPP. Three points.

M., W., and F. at 2.30.

Prerequisite: Course 1-2 or Course 3-4.

32—Virgil: Æneid (VII-XII). Miss HIRST. Three points.

M., W., and F. at 2.30.

Prerequisite: Course 1-2 or Course 3-4.

33—Seneca: Tragedies (selections). Professor KNAPP. Two points.

Tu. and Th. at 10.30.

Prerequisite: Course 1-2 or Course 3-4.

34—Lucan: Pharsalia. Professor KNAPP. Two points.

Tu. and Th. at 10.30.

Prerequisite: Course 1-2 or Course 3-4.

(For Teachers' Course by Professor LODGE see Education 175-176.)

MATHEMATICS

A1-A2—Geometry; Algebra and Trigonometry. Solid geometry; algebra, including permutations and combinations, determinants, and logarithms; trigonometry, including the use of tables, the solution of triangles, and the important analytical formulæ. Dr. KASNER and Dr. FINDLAY. Six points for the year.

Section I, M., W., and F. at 9.30; Section II, M., W., and F. at 10.30; Sections III and IV, Tu., Th., and S. at 9.30.

Prescribed for Freshmen that did not present advanced mathematics at entrance.

21—Analytical Geometry. Introduction to the analytical geometry of the plane and of space. Dr. KASNER. Three points.

M., W., and F. at 10.30.

Prerequisite: Course A1-A2 or advanced entrance mathematics.

22—Calculus. Elementary course in the differential and integral calculus. Dr. KASNER. Three points.

M., W., and F. at 10.30.

Prerequisite: Course 21.

23-24—Theory of Equations. Algebraic and numerical solution of equations, determinants, complex numbers. Dr. FINDLAY. Six points for the year.

M., W., and F. at 1.30.

Prerequisite: Course A1-A2.

25-26—Calculus. Differential and integral calculus. Professor COLE. Six points for the year.

M., W., and F. at 11.30.

Prerequisite: Course 22

27-28—Projective Geometry. Projective methods of pure geometry. Six points for the year. Dr. FINDLAY.

M., W., and F. at 11.30.

Prerequisite: Courses 21 and 22.

[29-30—Differential Equations. Ordinary and partial differential equations, with applications to geometry. Dr. KASNER. Six points for the year.

Prerequisite: Course 25-26.

Not given in 1905-06.]

[31-32—Advanced Analytical Geometry. Modern methods in analytical geometry; solid analytical geometry. Dr. FINDLAY. Six points for the year.

Prerequisite or parallel: Course 25-26.

Not given in 1905-06.]

[33-34—The Fundamental Concepts of Modern Mathematics. Lectures, discussions, and reports. Dr. KASNER. Six points for the year.

Prerequisite: Course 25-26.

Not given in 1905-06.]

† 151-152—History of Mathematics. Professor D. E. SMITH. Four points for the year.

Tu. and Th. at 9.30.

(Other courses in the history and teaching of mathematics are offered in Teachers College.)

MECHANICS

25-26—Theoretical Mechanics. Dr. KASNER. Six points for the year.

M., W., and F. at 11.30.

Prerequisite: Mathematics 25-26.

MUSIC

The Department of Music is part of the Division of Fine Arts of Columbia University. A full statement of the nature of the music courses, the requirements for admission thereto, and the regulations concerning registration therefor will be found in the current edition of the Announcement of the Division of Fine Arts, which can be obtained, without charge, upon application to the Secretary of Columbia University.

*** 1-2—General Musical Course.** History and analysis with illustrations. Professor McWHOOD. Two points for the year.

Tu. at 9.30.

*** 5-6—Harmony.** Professor McWHOOD. Four points for the year.

Tu., 10.30-12.30.

Students in Course 5-6 are recommended to take also Course 11-12.

* 10—**Analysis of Musical Sound.** Musical sounds in general; description of orchestral instruments, fully illustrated. Professor McWHOOD. One point.

Tu. at 2.30.

* 11-12—**Musical Dictation.** Professor McWHOOD. Two points for the year.

Tu. at 1.30.

* 13-14—**Musical Dictation, advanced.** Professor McWHOOD. Two points for the year.

F. at 1.30.

* 19-20—**University Chorus.** A mixed chorus, open to all students. Professor RÜBNER. One point for the year, when taken in connection with some other course in music.

Th. at 4.30.

* 101-102—**General Musical Course, advanced.** Discussion of modern music. Professor RÜBNER. Two points for the year.

W. at 9.30.

* 103-104—**Advanced Harmony and Practical Composition.** Professor McWHOOD. Two points for the year.

F. at 9.30.

* 105-106—**Counterpoint.** Professor McWHOOD. Four points for the year.

F., 10.30-12.30.

* 107-108—**Free Composition, advanced.** Professor RÜBNER. Two points for the year.

W. at 1.30.

* 109-110—**Orchestration and Symphonic Form.** Professor RÜBNER. Four points for the year.

W., 10.30-12.30.

PHILOSOPHY AND PSYCHOLOGY

Philosophy

A1-A2—**Logic and Scientific Method; Psychology.** Professor LORD and Dr. JONES.

Section I (names A-G inclusive), M., W., and F. at 9.30; Section II (names H-M inclusive) at 10.30; Section III (names N-Z inclusive) at 1.30.

Prescribed for Sophomores.

22—**Ethics.** Professor LORD. Three points.

M., W., and F. at 11.30.

Prerequisite: Course A1-A2.

* 101-102—**Metaphysics.** Professor FULLERTON. Six points for the year.

M., W., and F. at 2.30.

Prerequisite: Course A1-A2.

* 121-122—**Psychological Ethics.** Professor DEWEY. Four points for the year.

Tu. and Th. at 1.30.

Prerequisite: Course 22.

* 126—**Ethics—Social Reform Movements.** Professor ADLER. Two points.

W. and F. at 4.30.

Prerequisite: Course 22.

141—**Principles and Problems of Æsthetics.** Dr. JONES. Three points.

M., W., and F. at 2.30.

Prerequisite: Course A1-A2.

161-162—**Historical and Critical Introduction to Philosophy.** Dr. MONTAGUE. Six points for the year.

M., W., and F. at 9.30.

Prerequisite: Course A1-A2.

* 163-164—**Descartes, Spinoza, and Leibnitz.** Dr. MILLER. Four points for the year.

M. and W. at 11.30.

Prerequisite: Course 161-162.

* 165-166—**British Philosophy from Locke to Herbert Spencer.** Dr. MONTAGUE. Four points for the year.

M. and W. at 10.30.

Prerequisite: Course 161-162.

* 167-168—**The Philosophy of Kant.** Dr. MONTAGUE. Four points for the year.

M. and W. at 1.30.

Prerequisite: Course 161-162.

Psychology

5—**Analytic Psychology**, introductory course. Professor LORD. Three points.

Tu., Th., and S. at 11.30.

Prerequisite: Philosophy A1-A2.

This course is in continuation of Philosophy A2. It is designed to study intensively certain topics necessarily omitted altogether or but briefly discussed in the previous course.

* 111-112—**Experimental Psychology**, introductory course. Professor CATTELL. Four points for the year.

Tu. and Th. at 10.30.

* 113-114—**Experimental Psychology.** Laboratory work. Two or four hours weekly, counting as two or four points for the year. Professor CATTELL, assisted by Mr. BRUNER.

Tu. and Th. at 9.30, 2.30-4.30.

Parallel: Course 111-112.

PHYSICAL EDUCATION

A1-A2—Hygiene. Professor MEYLAN. One lecture a week.
Tu. at 1.30.
Prescribed for Freshmen.

PHYSICS

11-12—General Physics. Mechanics, heat, and sound; first half-year. Magnetism, electricity, and light; second half-year. Professor MALTBY and Miss BROOKS. Two lectures and two hours of laboratory work. Six points for the year.

Tu. and Th. at 11.30.

Prerequisite for Course 12: Course 11 or Elementary entrance Physics.

131—Mechanics. Miss BROOKS. Two lectures and two or four hours of laboratory work. Three or four points.

Tu. and Th. at 11.30.

Prerequisites: Course 11-12 and Mathematics 21-22.

132—Light. Miss BROOKS. Two lectures and two or four hours of laboratory work. Three or four points.

Tu. and Th. at 11.30.

Prerequisites: Course 11-12 and Mathematics 21-22.

133—Sound and Heat. Professor MALTBY. Two lectures and two or four hours of laboratory work. Three or four points.

Tu. and Th. at 9.30.

Prerequisites: Course 11-12 and Mathematics 21-22.

134—Electricity and Magnetism. Miss BROOKS. Two lectures and two or four hours of laboratory work. Three or four points.

Tu. and Th. at 9.30.

Prerequisites: Course 11-12 and Mathematics 21-22.

135-136—Physical Chemistry. Professor MALTBY. Three lectures and two, four, or six hours of laboratory work. Eight, ten, or twelve points for the year.

Hours to be arranged.

Prerequisites: Course 11-12 and Chemistry 5-6, Mathematics 21-22.
As a minor to candidates for the degrees of A.M. and Ph.D.; or with a thesis as a major for the degree of A.M.

(For Theoretical Mechanics by Dr. KASNER see **Mechanics 25-26.**)

Psychology. See **Philosophy and Psychology**

ROMANCE LANGUAGES AND LITERATURES

French

A1-A2—Elementary Course. Professor WOODWARD. Six points for the year.

M., W., and F. at 10.30 (with the possibility of another section at 1.30).

Prescribed for students that did not present French at entrance.

1B-2B—Grammar, Reading, Composition. Professor WOODWARD and Mr. MÜLLER. Six points for the year.

M., W., and F. at 11.30.

Prerequisite to Course 1B: Course A1-A2, Elementary entrance French, or their equivalent.

Prerequisite to Course 2B: Course 1B, Intermediate entrance French, or their equivalent.

1—General Introduction to the Study of French Literature. Seventeenth Century. Composition. Professor WOODWARD and Mr. MÜLLER. Three or four points.

Section I, M., W., and F. at 3.30; Section II, M., W. at 3.30, and F. at 2.30 (and for students entering on Intermediate French, also Tu. at 2.30).

Prerequisite: Course 1B-2B, Advanced entrance French, or their equivalent.

2—General Introduction to the Study of French Literature. Eighteenth and Nineteenth Centuries. Composition. Professor WOODWARD and Mr. MÜLLER. Three or four points.

Section I, M., W., and F. at 3.30; Section II, M., W. at 3.30, and F. at 2.30 (and for students entering on Intermediate French, also Tu. at 2.30).

Prerequisite: Course 1 or its equivalent.

3-4—Historical French. Practice in reading, writing, and speaking French. Mr. JORDAN. Six points for the year.

M., W., and F. at 11.30.

Prerequisite: Course 1-2 or its equivalent.

5-6—History of French Literature during the Seventeenth Century. Professor WOODWARD and Mr. BARGY. Six points for the year.

M., W., and F. at 2.30.

Prerequisite: grade C in Course 1-2, or Course 3-4, or their equivalent.

101-102—History of French Literature during the Eighteenth Century. Mr. BARGY. Six points for the year.

M., W., and F. at 1.30.

Prerequisite: Course 5-6 or its equivalent.

Courses 101-102 are a combination of Courses 101-102 and 103-104 as given in Columbia College.

105-106—History of the Literary Movement in France during the First Half of the Nineteenth Century. Mr. BARGY. Four points for the year.

Prerequisite: Course 5-6 or its equivalent.

Not given in 1905-06.]

Courses 105-106 and 107-108 are given in alternate years.

107-108—History of the Literary Movement in France during the Second Half of the Nineteenth Century. Mr. BARGY. Four points for the year.

M. and W. at 2.30.

Prerequisite: Course 5-6 or its equivalent.

[* 109-110—History of Literary Criticism in France, with special attention to Sainte-Beuve and Brunetière. Mr. BARGY. Four points for the year.

Prerequisite: Course 5-6 or its equivalent.

Not given in 1905-06.]

Courses 109-110 and 111-112 are given in alternate years.

*** 111-112—French Literature in the Sixteenth Century, with special attention to Montaigne.** Mr. BARGY. Four points for the year.

Tu. and Th. at 3.30.

Prerequisite: Course 5-6 or its equivalent.

*** 113—Old French: Reading of Selected Extracts.** Professor TODD. Two points.

Tu. and Th. at 2.30.

Prerequisite: Course 5-6 or its equivalent.

*** 114—Old French: Reading of Complete Texts.** Professor TODD. Two points.

Tu. and Th. at 2.30.

Prerequisite: Course 113 or its equivalent.

D—French Conversation, General Course. Professor WOODWARD.

W. at 1.30.

May be omitted in 1905-06.

The aim of this course will be to give the students an opportunity to use the vocabulary acquired by previous reading. It will consist of easy anecdotes read and discussed in the class, introducing subjects of every-day conversation. It cannot be counted for a degree.

Italian

1-2—Elementary Course. Grammar, reading, composition. Professor SPERANZA. Six points for the year.

M., W., and F. at 11.30.

This course may not be taken at the same time with Spanish 1-2.

101—Italian Literature of the Fourteenth Century, exclusive of the Divina Commedia. Composition. Professor SPERANZA. Three points.

M., W., and F. at 1.30.

Prerequisite: Course 1-2 or its equivalent.

102—Italian Literature of the Fifteenth Century. Composition. Professor SPERANZA. Three points.

M., W., and F. at 1.30.

Prerequisite: Course 101 or its equivalent.

Courses 101-102 and 103-104 and 105-106 are given in three successive years.

[103—Italian Literature of the First Half of the Sixteenth Century. Composition. Professor SPERANZA. Three points.

Prerequisite: Course 1-2 or its equivalent.

Not given in 1905-06; given in 1906-07.]

[104—Italian Literature of the Second Half of the Sixteenth Century and of the Period of Decadence down to the middle of the Eighteenth Century. Composition. Professor SPERANZA. Three points.

Prerequisite: Course 103 or its equivalent.

Not given in 1905-06; given in 1906-07.]

[105—Italian Literature of the Second Half of the Eighteenth Century. Composition. Professor SPERANZA. Three points.

Prerequisite: Course 1-2 or its equivalent.

Not given in 1905-06; given in 1907-08.]

[106—Italian Literature of the Nineteenth Century. Composition. Professor SPERANZA. Three points.

Prerequisite: Course 105 or its equivalent.

Not given in 1905-06; given in 1907-08.]

[* 107-108—Critical Study of Dante's Divina Commedia. First and second courses. Professor SPERANZA. Four points for the year.

Prerequisite: Either Course 102, 104, or 106, or their equivalent.

Not given in 1905-06.]

Courses 107-108 and 109-110 are given in alternate years.

*** 109-110—Critical Study of Dante's Divina Commedia.** Third and fourth courses. Professor SPERANZA. Four points for the year.

Tu. and Th. at 2.30.

Prerequisite: Either Course 102, 104, or 106, or their equivalent.

Spanish

1-2—Elementary Course. Grammar, reading, composition. Professor LOISEAUX. Six points for the year.

M., W., and F. at 11.30.

This course may not be taken at the same time with Italian 1-2.

101-102—General Introduction to Spanish Literature. Grammar, reading, composition. Professor LOISEAUX. Six points for the year.

M., W., and F. at 10.30.

Prerequisite: Course 1-2 or its equivalent.

* 103-104—The Spanish Novela of the Golden Age. Mr. FITZ-GERALD. Six points for the year.

M., W., and F. at 2.30.

Prerequisite: Course 101-102 or its equivalent.

Courses 103-104 and 105-106 are given in alternate years.

[* 105-106—The Spanish Classical Drama. Mr. FITZ-GERALD. Six points for the year.

Prerequisite: Course 101-102 or its equivalent.

Not given in 1905-06.]

Romance Philology

* 101—Introduction to Romance Philology, especially Phonology. Professor TODD. Two points.

M. and W. at 3.30.

Prerequisite: French 5-6 or its equivalent.

* 102—Introduction to Romance Philology, especially Morphology. Professor TODD. Two points.

M. and W. at 3.30.

Prerequisite: Course 101 or its equivalent.

ZOOLOGY

1(a)-2(a)—General Biology and General Zoölogy. Elementary course. Professor CRAMPTON, Dr. KELLICOTT, Miss DEDERER, and Miss REED. Two lectures and four hours of laboratory work. Eight points for the year.

Tu. and Th. at 1.30. Laboratory work, Tu. and Th., or M. and W., 2.30-5.30.

Laboratory fee, \$5.

Open to Juniors or Seniors; especially designed for students that have taken Physics 11-12, Chemistry 5-6, and Botany 51-52, and for students of physiology, geology, and medicine, as well as for those who intend to pursue zoölogy and botany.

1(b)—Histology. One lecture and two hours of laboratory work. Two points.

Hours to be arranged.

Laboratory fee, \$2.50, unless taken with Course 1(a).

Prerequisite or parallel: Course 1(a). Recommended as a parallel to Course 1(a).

2(b)—Embryology. One lecture and two hours of laboratory work. Two points.

Hours to be arranged.

Laboratory fee, \$2.50, unless taken with Course 2(a).

Prerequisite or parallel: Course 2(a). Recommended as a parallel to Course 2(a).

101-102—General Zoölogy. Advanced course. Professor CRAMP-
TON, Dr. KELLICOTT, and Miss REED. Three lectures, six hours of
laboratory work. Twelve points for the year.

Hours to be arranged.

Laboratory fee, \$5.

Prerequisite: Course 1-2 including 2(b) or its equivalent.

This course is designed for students intending to enter medicine, also for students of
zoölogy and botany, as graduate subjects.

151-152—General Physiology. General principles of animal phy-
siology. Dr. KELLICOTT. Two lectures, and four hours of demon-
stration and laboratory work. Eight points for the year.

Hours to be arranged.

Laboratory fee, \$5.

Open to Juniors and Seniors.

This course is designed for students of zoölogy, botany, and psychology, as well as
for students intending to study medicine, and may be taken together with, or sub-
sequent to, Course 1-2.

153-154—Practical Zoölogy and Embryology. Dr. KELLICOTT and
Miss DEDERER. Three hours conference and laboratory work. Four
points for the year.

Hours to be arranged.

Laboratory fee, \$5.

Prerequisite: Course 1-2 or its equivalent.

This course is designed for students of zoölogy desiring practice in the preparation
and mounting of zoölogical, histological, and embryological materials for microscopic
examination.

HOURS	MONDAY	TUESDAY	WEDNESDAY
A.M.			
9.30	*Astronomy 103-104 Botany 51-52 English 45-46 German 3-4 (I) Latin A1-A2 (I and II) Mathematics A1-A2 (I) Philosophy A1-A2 (I) Philosophy 161-162	*Anthropology 121-122 Botany 153-154 English 39-40 †Geography 1-2 German 13-14 History A1-A2 (I) Latin B1-B2 (I and II) Mathematics A1-A2 (III and IV) †Mathematics 151-152 *Music 1-2 Physics 133-134 *Psychology 113-114	Botany 51-52 English 45-46 German 3-4 (I) German 19-20 Latin A1-A2 (I and II) Mathematics A1-A2 (I) *Music 101-102 Philosophy A1-A2 (I) Philosophy 161-162
10.30	Economics A (I) Economics 4 English 27-28 French A1-A2 †Geography 5-6 German A1-A2 (I) German 3-4 (II) History 5-6 Latin 1-2 Latin 7-8 Mathematics A1-A2 (II) Mathematics 21-22 Philosophy A1-A2 (II) *Philosophy 165-166 Spanish 101-102	*Anthropology 117-118 Botany 53-54 English A1-A2 †Geography 1-2 Geology 101-102 German 7-8 History A1-A2 (II) Latin 33-34 *Music 5-6 *Psychology 111-112	Economics A (I) Economics 4 English 27-28 French A1-A2 †Geography 5-6 German A1-A2 (I) German 3-4 (II) History 5-6 Latin 1-2 Latin 7-8 Mathematics A1-A2 (II) Mathematics 21-22 *Music 109-110 Philosophy A1-A2 (II) *Philosophy 165-166 Spanish 101-102
11.30	Chemistry 5-6 English 21-22 English 35-36 French 1B-2B French 3-4 Greek 3-4 Greek 5-6 History 13-14 Italian 1-2 Latin 5-6 Mathematics 25-26 Mathematics 27-28 Mechanics 25-26 Philosophy 22 *Philosophy 163-164 Spanish 1-2	*Astronomy 101-102 Economics 109-110 English 1-2 English 23-24 *German 129-130 Latin 3-4 *Music 5-6 Physics 11-12 Physics 131-132 Psychology 5	Chemistry 5-6 English 21-22 English 35-36 French 1B-2B French 3-4 Greek 3-4 Greek 5-6 History 13-14 Italian 1-2 Latin 5-6 Mathematics 25-26 Mathematics 27-28 Mechanics 25-26 *Music 109-110 Philosophy 22 *Philosophy 163-164 Spanish 1-2
P.M.			
1.30	Anthropology 101-102 Economics A (II) English 29-30 French 101-102 German 1-2 (I and II) German 3-4 (III) *German 107-108 Greek 25-26 Italian 101-102 Mathematics 23-24 Philosophy A1-A2 (III) *Philosophy 167-168	Economics 105 Economics 120 English B1-B2 German 9-10 (I) German 11-12 *German 115-116 Hygiene A1-A2 *Music 11-12 *Philosophy 121-122 Zoölogy 1(a)-2(a)	Anthropology 101-102 Economics A (II) Economics 121-122 English 29-30 French D French 101-102 German 1-2 (I and II) German 3-4 (III) *German 107-108 Greek 25-26 Italian 101-102 Mathematics 23-24 *Music 107-108 Philosophy A1-A2 (III) *Philosophy 167-168
2.30	English 7-8 French 5-6 French 107-108 †Geography 3-4 German A1-A2 (II) German 5-6 *German 111-112 Greek 1-2 Greek 31-32 History 11-12 History 169-170 Latin 31-32 *Philosophy 101-102 Philosophy 141 *Spanish 103-104	Economics 151-152 French 1-2 *French 113-114 German 9-10 (II) German 15-16 Greek 1-2 History 7-8 History 157-158 *Italian 109-110 *Music 10 *Psychology 113-114	English 7-8 French 5-6 French 107-108 German A1-A2 (II) German 5-6 *German 111-112 Greek 1-2 Greek 31-32 History 11-12 History 169-170 Latin 31-32 *Philosophy 101-102 Philosophy 141 *Spanish 103-104
3.30	French 1-2 (I and II) *Germanic 125-126 *Romance Philology 101-102	*French 111-112 *Germanic 121-122 History 127-128 *Psychology 113-114	French 1-2 (I and II) *Germanic 125-126 *Romance Philology 101-102
4.30		*Germanic 127-128	*Philosophy 126

Courses marked with an asterisk * are given at Columbia University.

THURSDAY	FRIDAY	SATURDAY
*Anthropology 121-122 Botany 153-154 English 39-40 †Geography 1-2 German 13-14 History A1-A2 (I) Latin B1-B2 (I and II) Mathematics A1-A2 (III and IV) †Mathematics 151-152 Physics 133-134 *Psychology 113-114	Botany 51-52 German 3-4 (I) German 19-20 Latin A1-A2 (I and II) Mathematics A1-A2 (I) *Music 103-104 Philosophy A1-A2 (I) Philosophy 161-162	†Geography 1-2 History A1-A2 (I) Latin B1-B2 (I and II) Mathematics A1-A2 (III and IV)
*Anthropology 117-118 *Astronomy 103-104 Botany 53-54 English A1-A2 †Geography 1-2 Geography 101-102 German 7-8 Greek 5-6 (Prose composition) History A1-A2 (II) Latin 33-34 *Psychology 111-112	Economics A (I and II) Economics 4 French A1-A2 †Geography 5-6 German A1-A2 (I) German 3-4 (II) History 5-6 Latin 1-2 Latin 7-8 Mathematics A1-A2 (II) Mathematics 21-22 *Music 105-106 Philosophy A1-A2 (II) Spanish 101-102	English A1-A2 History A1-A2 (II)
*Astronomy 101-102 Economics 109-110 English 1-2 English 23-24 *German 129-130 Latin 3-4 Latin 23-24 Latin 25-26 Physics 11-12 Physics 131-132 Psychology 5	French 1B-2B French 3-4 †Geography 5-6 Greek 3-4 Greek 5-6 History 13-14 Italian 1-2 Latin 5-6 Mathematics 25-26 Mathematics 27-28 Mechanics 25-26 *Music 105-106 Philosophy 22 Spanish 1-2	English 23-24 Psychology 5
Economics 105 Economics 120 English B1-B2 German 9-10 (I) German 11-12 *German 115-116 *Philosophy 121-122 Zoölogy 1(a)-2(a)	Economics 121-122 English 29-30 French 101-102 German 1-2 (I and II) German 3-4 (III) Greek 25-26 Italian 101-102 Mathematics 23-24 *Music 13-14 Philosophy A1-A2 (III)	
Economics 151-152 *French 113-114 German 9-10 (II) German 15-16 Greek 1-2 Greek 27-28 History 7-8 History 157-158 *Italian 109-110 *Psychology 113-114	English 7-8 French 1-2 (II) French 5-6 †Geography 3-4 German A1-A2 (II) German 5-6 Greek 1-2 Greek 31-32 History 11-12 Latin 31-32 *Philosophy 101-102 Philosophy 141 *Spanish 103-104	
*French 111-112 *Germanic 121-122 History 7-8 History 127-128 Latin 21-22 *Psychology 113-114 *Germanic 127-128 *Music 19-20	French 1-2 (I) *Philosophy 126	

those marked with a dagger † are given at Teachers College.

ACADEMIC CALENDAR

1905-1906

- 1905—Aug. 30—Wednesday, Last day for filing applications for delinquent examinations.
- Sept. 11—Monday, Last day for filing applications for September entrance examinations by candidates for admission.
- Sept. 18—Monday, Entrance examinations, and examinations for deficient and debarred students begin.
- Sept. 20—Wednesday, Registration begins.
- Sept. 26—Tuesday, Registration ceases for students previously matriculated. Later applications received only upon payment of an additional fee of \$5.
- Sept. 27—Wednesday, First half-year, 17th year, begins.
Registration ceases for students matriculating for the first time. Later applications received only upon payment of an additional fee of \$5.
- Nov. 7—Tuesday, Election Day, holiday.
- Nov. 30—Thursday,
to
Dec. 2—Saturday, inclusive, Thanksgiving Day holidays.
- Dec. 23—Saturday,
to
1906—Jan. 6—Saturday, inclusive, Christmas holidays.
- Jan. 24—Wednesday, Mid-year examinations begin.
- Feb. 3—Saturday, First half-year ends.
- Feb. 5—Monday, Second half-year begins.
- Feb. 22—Thursday, Washington's Birthday, holiday.
- April 2—Monday, Last day for filing applications for scholarships.
- April 12—Thursday,
to
April 16—Monday, inclusive, Easter holidays.
- May 23—Wednesday, Final examinations begin.
- May 30—Wednesday, Memorial Day, holiday.
- June 5—Tuesday, Last day for filing lists of elective courses.
- June 8—Friday, Class Day.

- June 10—Sunday, Baccalaureate service.
- June 13—Wednesday, Commencement Day.
- June 18—Monday, Examinations of the College Entrance Examination Board begin. For dates for filing applications, see Document No. 19, issued by the Board, Post-office Sub-station 84, New York, N. Y.
- Aug. 29—Wednesday, Last day for filing applications for delinquent examinations.
- Sept. 10—Monday, Last day for filing applications for September entrance examinations by candidates for admission.
- Sept. 17—Monday, Entrance examinations, and examinations for deficient and debarred students begin.
- Sept. 19—Wednesday, Registration begins.
- Sept. 25—Tuesday, Registration ceases for students previously matriculated. Later applications received only upon payment of an additional fee of \$5.
- Sept. 26—Wednesday, First half-year, 18th year, begins.
Registration ceases for students matriculating for the first time. Later applications received only upon payment of an additional fee of \$5.

